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SEX PROBLEMS IN WOMEN

BY

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TO

MY MEDICAL FRIENDS

PREFACE

My object in writing this small handbook on the sexual life of woman is to present to the general practitioner a readable summary of an admittedly important and delicate subject. I have endeavoured to treat it in as practical and unsentimental a way as possible, and for this reason I have omitted to quote more than a very limited number of actual cases illustrative of the conditions dealt with. I desire to acknowledge my indebtedness to the standard works of Bloch, Havelock-Ellis, Kisch, Kraft-Ebing, Sanger and others, from all of which numerous extracts and condensations have been made. A chapter on anatomy and physiology has been added in order to place the matter on a scientific basis, but for fuller information concerning purely gynæcological conditions and venereology the reader is referred to my separate text-books on these subjects.

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CHAPTER I

INTRODUCTORY

THE study of sex and sexual abnormalities has been always a subject of profound interest and great importance. A lack of intimate knowledge of some of its details causes many of the rarer incidents of social life to be misunderstood or to appear inexplicable. Abnormal sexual conditions and impulses are at the bottom of much married unhappiness, are concerned in many extraordinary crimes and outrages against society, are the active agents in the production of the most diverse forms of mental disease and neurasthenia, and are involved in many of the common diseases of both men and women. Unless these facts are both realised and understood it is difficult for even the educated mind to grasp the inner significance of certain cases of melancholia, hysteria, sexual depravity, flagrant immorality, perverted habits, kleptomania, and a host of similar conditions which either cause acute domestic misery or terminate in the law-courts, the prison, or the asylum. It is equally impossible for the uninitiated to understand why a woman should cherish a love-passion for the man who ill-treats and abuses her, why another woman should dislike the man who lavishes a wealth of care and attention upon her, why a third is homosexual, why a fourth is a masochist or sadist, why some respectably connected women live the lives of prostitutes, why others appear to be sexually cold and unresponsive, why others again, though apparently in good health, complain of every kind of ache and pain, and why still others, without any sign of organic disease, suffer from very definite functional disorders.

In the present work an attempt will be made to elucidate these several points and to deal as concisely as possible with

such matters as abnormal coitus; sexual excess, frigidity and aversion; derangements of menstruation; love, marriage and prostitution; the results of venereal disease; the sexual life at puberty and the menopause; and the various sexual neuroses and psychoses to which women are subject under certain conditions.

To many patients sexual derangements and abnormalities are matters of the highest moment. To some they are questions of life and death. It is therefore easily seen that the medical practitioner will be well repaid by devoting special attention to this subject and by realising that behind many of the so-called neurotic affections of women there exists very frequently a deep current of disordered sexuality which is the root-cause of all their afflictions. At the very outset it is well to bear in mind that the whole subject bristles with difficulties and pitfalls. Women as a general rule are not inclined to talk freely about sexual matters unless some very grave issue is at stake. Even then they are apt to cloak the matter to such an extent as to render their case difficult to diagnose. Moreover, the family doctor is not always the recipient of their confidence, indeed they often prefer to broach the subject to an entire stranger. In other cases the information is given by the husband, the mother, or some other relative. Young unmarried girls not infrequently consult a doctor for the mere purpose of being examined and thereby obtaining a certain amount of sexual excitement or gratification, and the practitioner will do well to be on his guard against such proceedings; in any case, no great reliance is to be placed upon their statements as to sexual troubles without ample verification, and no examination of a physical nature should be made unless a third party is present. Sexually perverted women rarely reveal the true nature of their troubles to the medical man, although they may seek his advice upon a multitude of other matters. A diagnosis has often to be made from inference and may sometimes be verified by a tactful accusation delivered as if it were a matter of course.

Hysterical patients often succeed for a time in convincing their doctors that they are suffering from some actual disease, when such is not the case. They may mislead the specialist

also, and not a few operations have been carried out for a purely imaginative disorder, the symptoms of which have been accurately described and insisted upon. On the other hand, an obviously neurotic and hysterical woman may be also suffering from a serious malady, and yet by her behaviour so convince her medical attendant that all her symptoms are imaginary, that he may decide against a thorough physical examination and thus allow his patient to lose her only chance of cure.

Again, some women, for inexplicable reasons, purposely concoct a history of utterly incorrect symptoms, which baffles the investigator and may end in their receiving treatment which cannot possibly serve any useful purpose and may even be definitely harmful.

The modern tendency for women to assert themselves as the equal of man in both intellectual and physical pursuits has not been an unmixed blessing. It has imposed upon them a stress and strain which many have been unable to bear. Neither their minds nor their bodies are constituted on the same plan as in the male, and no good is likely to follow a determination to regard them as so constituted. For a time the novelty of the idea may act as an attraction to the opposite sex, but eventually, if persisted in, the advocacy of advanced women's rights will be found detrimental to marriage, and will probably swing the pendulum of self-preservation back to the other extreme of its course—the position of woman's assumed entire dependence upon man. One uses the term "assumed" advisedly. Very few women actually permit themselves to be regarded as a man's inferior in the home, and most of them control his actions and act as his equal in many affairs of daily life. But the insistence of complete independence produces a condition of things which is apt to end in unhappiness and an empty cradle. It is especially in the last respect that the sting is felt, and it is there also that much of what may be termed psychopathia sexualis originates. A woman may become a mother in the absence of sexual feelings, but a man cannot impregnate a woman unless his sexual passions are aroused. So that the less a woman stimulates the sex instinct in man, the less chance has she of either marrying or of becoming

a mother. This is a law of Nature that not all the advocates of the equality of the sexes can alter by one iota. It is a fixed, unalterable law which is no respecter of persons or nations. Psychically, man and woman are absolutely different, physically they are different also. Each is dependent upon the other, and each plays a different part in the life-history of the human species. Woman's part should be that of taking care of the home, developing the love instinct in herself and her natural mate, and bringing up her children. If she despises this part and prefers to adopt that which is usually considered to be the prerogative of the male, she will have to face the prospect of non-success and pay the price with a disordered mind and body. It is the experience of many gynæcologists and others that women who go to extremes in the way of "independence" are frequently the subjects of sexual abnormalities or deficiencies, or have so peculiarly constituted a nervous system as to be led away by their imagination beyond the control of common sense and reason.

Women have now obtained for themselves the right to enter Parliament, to be ministers of religion, to be physicians, surgeons, dentists, lawyers, professors, and in short to follow any occupation hitherto reserved for men. Some of them have risen to great eminence, many have done good work, but on the whole it is doubtful if the results obtained have been worth the price. The tendency for these "emancipated" women who follow masculine occupations is to become more or less neutral on sexual matters. They regard love and marriage as secondary affairs; the functions of the wife and mother are to some extent forgotten; men do not seek their society very keenly; and they cause a falling-off of the birth-rate whilst markedly increasing the percentage of nervous complaints and sexual disorders.

These various statements concerning the dangers to woman's health and sexual life brought about by the modern women's movement are all stoutly denied by their leaders, but they are none the less true. Moreover, if woman is compelled by nature to make heavy sacrifices for the preservation of the species, she has also her reward in the shape of love and motherhood, whilst the repression of the sexual impulse and the suppressed

desire for children can only end in harmful consequences. One admits freely that young girls and women who have never experienced sexual stimulation may often be devoid of specific sexual impulses, but in such cases there is usually developed a strong desire for some form of excitement or pleasure for which they are unable to give an adequate explanation. It is this craving for vicarious sexual relief that induces some women to seek notoriety at any price. But whilst admitting that sexual impulses in the virgin are probably in most cases less marked than in the male, it must be remembered that after marriage or repeated intercourse the reverse may be the case, some women even demanding more than the average husband can supply. In this connection it is noted that sexual excesses do not appear to have much detrimental effect upon the female, whilst upon the male they frequently produce debility and neurasthenia. Moreover, many women attain the height of their sexual activity considerably later in life than men, and this tendency sometimes operates adversely to the husband should he be somewhat advanced in years or of an indifferent sexual disposition. On the other hand, one meets with a certain number of women who have no great desire for coitus and are perfectly satisfied with occasional intercourse, although they demand absolute fidelity from their husbands. Others, again, appear so frigid by nature that they do not desire coitus at any time, whilst a few regard the act with so much aversion that they even request their partners to seek sexual satisfaction elsewhere.

Similarly, whilst the great majority of women have strong desires for motherhood, there are some who view the prospect with distaste and a few with terror. Child-bearing is regarded as a calamity by those who wish to indulge in the pleasures of society and to enjoy to the full the comparative freedom of married life without having to submit to any of its natural consequences. Nervous and ignorant women who have been frightened by stories of difficult labour related to them by thoughtless acquaintances, or read of in medical works, occasionally develop an unreasoning dread of childbirth and will go to any lengths to prevent conception. Both these conditions are to be deplored, but whilst the latter may be remedied

by a process of explanation and reasoning, the former is often so dependent upon a natural selfishness and love of pleasure that little headway can be made against it.

It is perhaps more common, however, for women to exhibit unselfishness than to be selfish, and for this very reason they not infrequently make themselves the willing slaves of their husbands and families to the undoubted detriment of their general health. They toil incessantly from early morning until late at night to keep their homes spick and span, to provide good meals, to dress the children suitably, to darn socks and repair clothing, to wash, scrub, scour and polish everything that can be so treated; and they grow tired and old in the process, they lose their good looks, they have no time to make themselves attractive to their husbands, their tempers become soured and their vital energy is sapped at its roots. The man no longer sees in his wife the sexually attractive, lively and blooming woman of bygone days, and whilst admitting that she is everything that a housewife could be, he may nevertheless find that she no longer has the power to stimulate or satisfy his sexual needs. The wife soon notices the difference in her husband's behaviour, but seldom realises that it is due to her own shortcomings and usually suffers in silence, unless it is made patent to her that another woman has entered into the case.

Many women with strong sexual appetites are deprived of sexual satisfaction from their husbands for quite trifling reasons, of which they may remain in utter ignorance, usually because the man is unwilling or too sensitive to explain. Thus, such minor matters as offensive breath, careless attire and lack of attention to personal appearance may react so strongly upon the husband as to inhibit his sexual powers altogether. More serious are such defects as vaginal and perineal tears after a severe labour, an offensive vaginal discharge, uterine prolapse, and so on. The necessity for remedying anything that may interfere with the husband's enjoyment of the sexual act will thus be obvious in the best interests of the woman herself.

The question of perverted sexual habits in women is not one to be altogether ignored, although it does not occur nearly so frequently as in the male. Masturbation is common, and if

indulged in to excess produces a variety of neuroses that undermine the constitution and result in unfavourable developments; but in most cases marriage cures the habit and restores the patient's health. Occasionally, however, the woman prefers the abnormal method of obtaining sexual relief and displays a distaste for normal coitus. Such cases are a fertile source of marital unhappiness and may lead to disaster.

Homosexuality in women is rare, and when it occurs is usually due to mental disorders.

The influence of venereal disease is far-reaching and of the utmost gravity. The local effects of gonorrhœa frequently extend to involve the whole of the internal sex organs and even to infect the abdominal cavity. Severe and destructive inflammations of the uterus, tubes and ovaries frequently follow gonorrhœal infection, and may render the unfortunate woman a chronic invalid, incapable of conception and afflicted with permanent pelvic disease. She may even have to submit to operative measures to obtain a measure of relief, and entire removal of all her sexual organs is not infrequently requisite. Syphilis, unless treated energetically, means general ill-health and grave internal complications; abortion is the usual termination of conception, but if a child is born at term it is generally diseased and liable to early death or premature decay. The mental effects of venereal disease are also, naturally, serious, and it is almost impossible to even enumerate the many evil and disastrous consequences.

Difficulties interfering with copulation require the closest attention. Dyspareunia may so seriously affect a woman's whole nature as to produce a demoralising and mentally damaging result which entirely destroys the happiness of married life. Particularly is this the case with vaginismus of nervous origin.

Unsympathetic coitus is a frequent cause of nervous disturbances and marital infidelity. Ungratifying coitus due to withdrawal before the sexual orgasm has occurred, coitus reservatus and coitus condomatus are also liable to lead to neurasthenia sexualis, and should be specially investigated in women exhibiting signs of this trouble.

Sexual derangements due to actual disease of the sex organs belong more to the domain of the gynæcologist than to the

student of the sexual life of woman, but it must not be forgotten that many conditions of abnormal sexuality may have some serious organic disease as a basal factor in their causation, and that in all cases a careful physical examination must never be omitted.

Sexual defects and abnormalities in the husband are often productive of much hidden misery in the wife. It is astonishing how much a woman will conceal, if she is of a sensitive nature or very much attached to her husband and fearful of damaging his reputation. It repeatedly happens that the physician, after prolonged and vain attempts to cure baffling pelvic and nervous troubles in an otherwise healthy woman, is at last given a clue to the mystery by the husband himself volunteering the information that he suffers from some form of impotence or is unable for various reasons to satisfy his wife's sexual needs. It cannot, therefore, be too strongly emphasised that an interrogation and examination of the husband is always advantageous in the diagnosis of female sexual troubles.

Puberty and the menopause are characterised by special nervous and pelvic disturbances which may be either slight and productive of no great discomfort, or severe and liable to induce serious mental and physical disease. At puberty the tendency to anæmia, chlorosis, dyspepsia, nervous irritability, depression of spirits, the development of reserve towards the opposite sex, and sexual irregularities connected with the onset of menstruation are well known. At the menopause the cessation of the menses is associated with various irregularities before the process is completed: the nervous system is frequently profoundly affected, and flushings, sensations of heat and suffocation, profuse perspirations, palpitation, fainting attacks, skin eruptions and pruritus, a tendency to obesity and various other troubles are complained of. At both puberty and the menopause certain definite anatomical and physiological changes take place in the sexual organs and demand special consideration.

The influence of love, dissociated as far as possible from sexual passion, has a direct bearing upon the general health of all women, and it is easy to understand how an unrequited affection may convert a healthy young woman into a morose,

depressed, dyspeptic and neurasthenic semi-invalid, when one considers the intimate relationship between the nervous system and the various internal organs concerned in the nutrition of the body.

It is a well-known fact that the nervous system of women is much more easily disturbed than that of men. It is also recognised that the widest and most accessible path for the conduction of spinal reflexes to the mind is the one through which the sexual reflex passes. Women are thus peculiarly liable to hysterical outbursts on small provocation, to attacks of melancholia, to the development of impulsive manifestations and to various forms of psychoses. Actual insanity is probably not more frequently present than in the male, for although the female nervous system is much more easily upset, it is also much more easily restored, probably by reason of the fact that the tension is relieved through channels which the average man is unable to avail himself of.

The results of marriage, with regard to offspring, are very varied and demand close attention. Some women conceive very easily, others only with the utmost difficulty. A single coitus may effect conception on repeated occasions in one woman: a thousand attempts may be needed before the desired result is obtained in a second. Some women appear to be incurably barren without any discoverable cause. Very often, of course, a reason can be given, but not always. The commonest cause is gonorrhœal infection leading to disease of the tubes and ovaries: the rarest cause is the so-called "condition of sexual incompatibility." Not infrequently sterility is due to faults on the part of the husband, the wife being free from all blame. In other cases both parties may be found to be defective. Further, sterility may be absolute or merely relative.

Methods of preventing conception have been practised from time immemorial. Some are harmless, others react powerfully upon the nervous system and produce well-marked neuroses and psychoses. Coitus reservatus and coitus interruptus are particularly harmful to women in the latter respect. It must also be remembered that Nature deprived for too long a period of her rights may retaliate finally by refusing to grant offspring when such is eventually most eagerly desired.

Abortion is a mishap which occurs much more frequently than is realised by the majority of people. It is probable that few women who have had large families escape at least one miscarriage, whilst with many it is a frequent occurrence. The most common cause of repeated abortions is undoubtedly syphilitic infection, but some women seem prone to miscarry on quite insignificant provocation.

That dress should play a part in the sexual life of woman is apparent on a little reflection. Certain kinds of attire are well known to stimulate desire in the opposite sex, whilst slovenliness in dress or coarse or dirty garments may suffice to repel the male or render him incapable of performing the sexual act. It is inborn in most women to desire to render themselves attractive by means of pretty or striking clothing, by jewellery and by perfumes and cosmetics. If deprived of the means of obtaining any of these things, they become depressed and suffer in their general health. The stimulating effect of personal adornment is a factor in the treatment of functional disorders of women that must not be forgotten.

A consideration of the causes and effects of prostitution is worthy of special attention for several reasons. Uncontrollable sexual desires, the love of luxury and fine clothes, disinclination for the drudgery and monotony of honest work which is frequently ill-paid and leaves little time or opportunity for pleasure, the results of a lapse from morality and the depressing effects of a lover's deception in the shape of an illegitimate child and its abandonment by the indifferent father, all have an undoubted influence in swelling the ranks of the modern prostitute class. Prostitution is almost inevitably associated with sexual disorders and diseases in the women themselves, and it is also the main source from which venereal complaints originate; it is a common cause of unhappiness in married life; it is frequently associated with the development of abnormal sexual acts and habits; and in the vast majority of cases the wife suffers sexually and generally from the unfaithfulness of her husband, whilst the unmarried girl may also suffer in a similar way by her engagement being broken off or marriage long delayed owing to venereal infection of her fiancé, or if her nuptials are not delayed she may become

herself infected as soon as the marriage is consummated. Or without any question of marriage a man infected by a prostitute may pass the disease on to several innocent women. Again, prostitution is so frequently associated with alcoholic excesses, with gambling and with evil company, that the man's moral nature tends to deteriorate and decent women of his own class in life suffer as an indirect consequence. The plea that prostitutes spare respectable girls from assaults against their virginity, since many men must find some outlet for their passions before they are able to marry, is a plausible one on the surface, but the average results of prostitution are so fearfully disastrous and fraught with so much danger to the individual and to the community at large that the advocacy of youthful continence and early marriage has much more in its favour. If, however, it is considered that prostitution is inevitable, the dissemination of a full knowledge of the risks run, together with means of immediate disinfection, should be regarded as an imperative duty on the part of the State. No man should be allowed to imperil his own health and that of his prospective or existing wife and family through ignorance or lack of medical help and advice.

The provision of a medical certificate of good health before marriage is also a matter which should be considered a State duty in order to prevent the spread of communicable disease and to ensure as far as possible the begetting of healthy offspring. Quite apart from venereal affections, it is obvious that persons actually suffering from consumption, cancer, epilepsy, or insanity are unfit to marry, whilst those with strong hereditary tendencies towards consumption and insanity obviously require a very careful medical examination and a period of probation before marriage can be sanctioned. Chronic alcoholics, drug-takers, habitual criminals, and hopelessly immoral individuals of either sex should not be allowed to marry or to beget children, since their partners in life would almost certainly suffer and their offspring be tainted. It is also certain that society as well as individuals would benefit considerably if the divorce laws were so amended as to grant divorce to those whose legal mates develop such obvious signs of degeneration and disease as those just mentioned.

Having now briefly outlined the nature of the subject which it is intended to discuss, we shall proceed to consider each of the main subdivisions in somewhat concise detail.

A preliminary study of the anatomy and physiology of the female generative organs is, however, an absolute necessity.

CHAPTER II

ANATOMY AND PHYSIOLOGY

The Uterus is a small, thick-walled, hollow, muscular organ, shaped very like a pear, placed in the pelvis between the bladder and the rectum, and lying with its long axis forwards (anteversion), so that when the woman is standing upright the uterus is almost horizontal.

For convenience, the organ is considered as consisting of two portions, a *corpus* or body, and a *cervix* or neck. The junction of the two is marked upon the outer surface by a slight constriction which is called the *isthmus*. At the isthmus the body is slightly bent forwards on the cervix (anteflexion).

The whole uterus, though best described as pear-shaped, is distinctly flattened antero-posteriorly in the body. There is also a slight rotation of the organ to the right so that the left edge is slightly nearer to the front of the pelvis than the right edge. The cervix is practically cylindrical in shape. Although the uterus is hollow its walls are normally almost in contact. When these are separated the cavity of the body is about 1 inch (2·5 centimetres) wide at the fundus (the uppermost and widest part), by 1½ inch (3·5 centimetres) long; it contracts at the level of the isthmus to form the internal os, continues in the cervix as a narrow spindle-shaped tube, and contracts again at the lower end of the cervix to form the external os. The cervical cavity is about 1 inch (2·5 centimetres) long, so that the total length of the uterine cavity is about 2½ inches (6·25 centimetres).

The Fallopian or uterine tubes join the uterus at the extremities of its greatest transverse diameter (the *cornua* or *angles* of the uterus).

The external measurements of the uterus are as follows :—

Length, 3 inches, or 7·5 centimetres.

Breadth, 2 inches, or 5 centimetres (measured between Fallopian tubes).

Thickness, 1½ inches, or 3·75 centimetres (measured between Fallopian tubes).

The uterus weighs about 1½ ounces, or 42 grammes. The uterine walls are about ½ inch (1·25 centimetres) thick. All the above-mentioned measurements and weights refer to the normal adult virgin uterus. After pregnancy they are increased and in old age often much diminished. In childhood they are naturally much less. The cavity of the uterus is lined with a special kind of mucous membrane, which is called the *endometrium*, and which is actively concerned in the phenomena of menstruation and pregnancy. The uterine cavity communicates through the external os with the vagina, and through the Fallopian tubes with the peritoneal cavity or cœlom.

That portion of the cervix uteri which projects into the vagina is called the *vaginal cervix* or *portio vaginalis;* the upper part of the neck of the uterus which lies above the cervico-vaginal attachment is called the *supravaginal cervix* or the *portio supravaginalis*. In certain forms of abnormal elongation of the cervix an *intermediate portion* is also referred to for descriptive purposes. In nulliparous women the vaginal cervix is cone-shaped with the apex of the cone directed downwards, and the external os presents as a small rounded opening. After pregnancy the opening is a transverse slit, and definite anterior and posterior lips can be noted (often scars and lacerations also). The portio vaginalis is covered by a reflection of the vaginal mucous membrane, which is firmly attached to it. The cervix is loosely united to the bladder above the vagina by cellular tissue; laterally it forms attachments to the pelvic connective tissue.

The uterus is almost entirely covered with peritoneum, back and front, but at the sides there are small portions without any such covering. The cervix is not covered at the front and sides, but posteriorly there is peritoneum over the supravaginal cervix forming part of the pouch of Douglas.

The abdominal peritoneum passing down the anterior abdominal wall on to the bladder forms a pelvic fold between the bladder and the uterus, which is known as the utero-vesical pouch. This pouch is bounded by two thickened edges, the utero-vesical ligaments. The pelvic peritoneum joins the uterus at the isthmus and covers the anterior surface, the fundus, and the posterior surface of that organ. At the point where

the cervix meets the vagina the peritoneum is continued on to the posterior vaginal wall, dips down for ½ inch or so and then becomes reflected on to the anterior wall of the rectum, thus forming the utero-vagino-rectal pouch of Douglas. As the peritoneum passes upwards from Douglas' pouch posteriorly, it gradually surrounds the bowel more and more until it finally completely encloses it and forms its mesentery. The peritoneum is firmly attached to the uterus, except in one situation, namely, on the lower part of the anterior wall up to ½ inch above the level of the internal os.

From the sides of the uterus the double folds of peritoneum run off laterally to the abdominal wall and constitute the *broad ligaments;* these are attached to the sides of the pelvis near the sacro-iliac synchondroses. The free upper border of the ligament contains the Fallopian tube as far as this extends and then forms the so-called *infundibulo-pelvic ligament* (ligamentum suspensorium ovarii) which encloses the ovarian artery. Of the two layers of the broad ligament the anterior one is slightly lifted up to cover the round ligament of the uterus, whilst the posterior layer covers the ovarian ligament and gives attachment to the ovary. Above the latter attachment and between the ovary and the Fallopian tube the broad ligament is known as the *mesosalpinx* and contains the parovarium (organ of Rosenmüller, epoöphoron) and part of Gartner's duct.

The Walls of the Uterus are composed mainly of smooth muscle fibres and fibrous tissue in the proportion of three of the former to two of the latter. This proportion is reversed before puberty and after the menopause. Some elastic tissue, blood vessels, nerves, and lymphatics are also present. The arrangement of the muscular fibres is almost impossible to make out in the virgin uterus, but in a pregnant one, when the muscle fibres have increased perhaps tenfold in size, the following layers are described :—

(1) A network of covering fibres.

(2) The subserous lamina—longitudinal bands starting from the cervix anteriorly and running upwards and over the fundus to end posteriorly in the cervix again.

(3) The vascular lamina—an interlacing layer of fibres

running in all directions and surrounding all the blood vessels. It forms the so-called "living ligatures" which serve to stop hæmorrhage after the separation of the placenta.

(4) The submucous lamina—circular fibres which are most marked around the openings of the Fallopian tubes and at the internal and external ora, and which probably act as sphincters.

The Endometrium is the mucous membrane lining the cavity of the uterus; it is pale yellowish-pink in colour, smooth in the body but ridged in the cervix where it forms the so-called *arbor vitæ*. It is about 2 millimetres in average thickness, and consists of surface epithelium, tubular invaginations of this (forming glands), and a considerable amount of connective tissue in the form of interglandular stroma.

There is no submucous layer to the endometrium which cannot, therefore, be peeled off, and when it is curetted or scraped off, the lower parts of the tubular invaginations still remain imbedded between the muscular fibres and later on will grow and replace the removed portions.

The epithelium consists of a single layer of epithelial cells on a basement membrane; the cells are columnar and ciliated, and the cilia all work towards the cervix, *i. e.* downwards. The glands of the body of the uterus are utricular or bladder-like, and penetrate the mucous membrane down to the muscular coat. These simple tubular glands run almost at right angles to the surface and secrete a thin milky alkaline fluid.

The interglandular substance is connective tissue of an embryonic type, *i. e.* it is packed with small irregularly-shaped cells with large nuclei and little protoplasm, whilst the connecting fibrils are few. Round lymphocytes are present in large numbers and produce an impression, from their resemblance to mononuclear and polynuclear leucocytes, that inflammatory processes are concerned. It is supposed that these stroma cells are the main factors in the production of rapid uterine changes of various kinds, since by their elementary type they are able to transform themselves into any sort of tissue that may be required.

Very fine blood-vessels run through the endometrium, and the small arterioles end in little loops round the mouths of the glands. Some of the vessels in the stroma are thicker and more tortuous, but none of them have fibro-muscular walls. In the cervix there is much more fibrous and elastic tissue than in the body. The mucous membrane of the cavity shows a longitudinal ridge on both anterior and posterior walls and lateral branching ridges from the longitudinal one. No ciliated cells are to be found in the furrows between the ridges.

The glands of the cervix are more numerous than those of the body, and most of them are compound racemose in structure.

Some of the deep columnar cells of the cervical glands are of the " goblet " variety, and secrete a thick sticky alkaline fluid, which is characteristic of these glands; it quite closely resembles white of egg in appearance. When the terminal portions of the glands become obstructed from any cause we may find small retention cysts appearing on the surface of the cervix. To these the name of Naboth's ovules has been given.

At the external os the mucous membrane changes from columnar to squamous, and somewhat resembles skin. Several layers of stratified squamous epithelium without any glands are seen on microscopic examination. A few ovula Nabothi may appear on the surface.

Before puberty, the cervix is larger than the corpus uteri, and the arbor vitæ extends high up but is not well marked; the cervix projects but slightly into the vagina, the uterine and cervical cavities are almost non-existent and the fundus is small. After the menopause the cervix again becomes less prominent than in the adult, when examined *per vaginam*, and the whole organ is atrophied.

The Fallopian Tubes (uterine tubes, oviducts) connect the ovary with the uterus. They also connect the uterus with the peritoneal cavity, so that in the female it may be said that there is a direct passage from the exterior of the body to the peritoneum. It is true that under ordinary conditions this passage is not actually patent, but it is a very important factor to bear well in mind with regard to the spread of infective inflammations.

The Fallopian tubes are hollow muscular tubes, about 4 inches (10 centimetres) long, and varying from $\frac{1}{8}$ to $\frac{1}{4}$ inch (3 to 6 millimetres) in thickness. They extend outwards from the uterus, and arch over the ovaries, to which they are usually connected by one of the fringes or fimbriae which surround the abdominal openings of the tubes.

Morphologically, the Fallopian tubes represent the upper portions of the Müllerian ducts.

For purposes of description four parts of the tube are referred to. They are—

(1) The uterine or interstitial portion ($\frac{1}{2}$ inch long).

(2) The isthmus or inner third. (*Note.*—(1) and (2) portions will admit a bristle.)

(3) The ampulla, the widest portion, which will admit a uterine sound.

(4) The infundibulum, the fimbriated extremity of the ampulla which opens into the cœlom. This trumpet-shaped end of the tube, with deeply serrated margins, frequently exhibits a connecting link with the ovary, the fimbria ovarica, which is considered by many to act as a grooved canal along which the ovum passes into the tube.

The hydatid of Morgagni, a small pedunculated cyst attached to the mesosalpinx close to the infundibulum, is a degenerate fimbria of pronephric origin. It occasionally enlarges and becomes troublesome.

About one-sixth of the Fallopian tube has no peritoneal covering and consists of the floor of the tube as it lies between the layers of the broad ligament. Rather more of the isthmus than of the ampulla is uncovered.

Structure of the Fallopian Tube.—Underneath the peritoneal covering of the tube is a loose cellular subserous layer, beneath which the muscular tissue is arranged in three layers :—(1) outer and longitudinal, (2) middle circular, (3) inner and longitudinal. The tube is lined with mucous membrane, which is composed of ciliated columnar epithelium supported by thin cellular tissue. It is thrown into a series of longitudinal folds which are specially well marked at the fimbriated end. At the abdominal ostium, the ciliated, columnar epithelium is altered,

and becomes flattened like that of the peritoneum. Occasionally two abdominal openings have been noticed and quite frequently short diverticula inside the tube are found. The latter are of importance in connection with the production of tubal pregnancy.

The Ovaries are the essential organs of the generative system of the female. They are ductless glands attached to the posterior layer of the broad ligament on each side of the uterus. Though attached to the posterior layer they are actually situate between the two layers, *i. e.* intraligamentous. Their level in the pelvis is about that of the pelvic brim, but the position of their long axis differs so much even in perfectly normal and healthy women, that it can only be said to vary from horizontal to vertical. The average ovary is about 1½ inches long, ¾ inch wide, and ⅜ inch thick; its average weight is 1½ drachms. It is held in position (1) by the attachment of its anterior edge to the broad ligament; (2) by a thick band running from its upper and inner end to the cornu of the uterus = the ovarian ligament; (3) by the ovarian fimbria of the Fallopian tube, which is attached to the lower and outer end of the ovary; (4) by the so-called " suspensory ligament " of the ovary (infundibulo-pelvic ligament), which is attached to the side wall of the pelvis and is really the free edge of the broad ligament.

The posterior edge of the ovary is free and convex in outline, the anterior is straight and attached as already described. The left ovary lies in close relationship to the rectum, hence the reason why many ovarian complaints are made worse by constipation. Each ovary actually lies in a depression on the surface of the obturator internus muscle. The most important part of the ovary is the cortex, which consists of germinal epithelium, *primary ovarian* or *Graafian follicles*, and connective tissue. The medullary portion of the ovary is composed of connective tissue, unstriped muscle, blood-vessels, nerves and lymphatics.

The Germinal Epithelium is the source from which ova are derived. Processes of connective tissue grow out from just below this epithelium and surround a number of the cuboidal cells. In this way a primary ovarian or Graafian follicle is

produced. Each follicle contains an ovum surrounded by a number of flat or cuboidal epithelial cells; as the follicle grows in size the surrounding cells rapidly multiply and a certain amount of fluid distends it (vesicular ovarian follicle). When ripe and protruding from the surface of the ovary it becomes so distended that it bursts and liberates the ovum (ovulation).

A mature Graafian Follicle, then, consists of a follicle proper and a surrounding fibrous and vascular sheath (tunica externa or fibrosa and tunica interna or vasculosa) derived from the cortical stroma. The tunica interna consists of several layers of epithelioid cells, which contain a bright yellow pigment, known as lutein.

The follicle proper is composed of the following parts from without inwards :—(1) Several layers of cells with darkly staining nuclei—the membrana granulosa, which at one part is very much thickened and contains a large number of heaped-up cells, forming a mass known as (2) the discus proligerus or ovular cumulus, inside which is contained the ovum. The cavity of the follicle is filled with a clear liquid (3) the liquor folliculi.

The cells of the discus proligerus, just round the ovum, seem to be arranged in a radiating fashion, and to them the name of " corona radiata " has been given. Part of this layer usually sticks to the ovum when it escapes from the follicle.

A sort of inner lining to the corona radiata is known as the zona pellucida, or zona striata, or oölemma; then follows a minute cavity, the perivitelline space, inside which lies the ovum surrounded by a fine membrane, the vitelline membrane. The ovum is composed of protoplasm, clear in its outer parts but granular towards its centre (deutoplasm). It has an excentrically placed nucleus (germinal vesicle) and a nucleolus (germinal spot). The ovum measures about $\frac{1}{120}$ inch in diameter. When the Graafian follicle bursts the ovum (oöcyte) has passed through the first stage of maturation. The second stage of maturation, with the final forming and casting-off of the polar bodies, takes place in the Fallopian tube after the spermatozoon has entered the cell and impregnated it. The impregnated cell is called a zygote, and from it a new living person may be formed. If no spermatozoon enters the oöcyte, the latter is

simply converted into so much waste material, passes through the tubes and uterus and is expelled from the system. It is interesting to notice the immense amount of preparation that the ovum has to go through before it is ready to be fertilised, also to remember that at birth each ovary is estimated to contain at least 100,000 potential ova.

When the ovum and liquor folliculi have escaped from the burst Graafian follicle the latter fills up with blood from the torn capillaries, bleeding being also produced by the sudden reduction of pressure. The blood clots and the lutein cells of the tunica interna enlarge and rapidly multiply to form a lutein layer of folded and convoluted masses of cells bound together by bands of newly grown connective tissue and blood-vessels. This cell invasion of the blood clot very quickly absorbs nearly all of it. Only a very tiny scar remains, and the lutein cells themselves degenerate and disappear. The size of this so-called " corpus luteum " varies according as the ovum is fertilised or not. The corpus luteum of an unfertilised ovum is never more than ½ inch in diameter, and often much less. It disappears entirely in a couple of months. If pregnancy supervenes the corpus luteum gradually increases in size until the end of the third month, when it measures about 1 inch across. It does not disappear completely until two or three months after the child is born. In other words, the corpus luteum of pregnancy lasts about a year. Some authorities believe that the lutein cells are not derived from the tunica interna of the theca folliculi, but from the cells of the membrana granulosa.

The functions of the corpus luteum are (1) to cause the gap in the ovarian substance to heal up with a minimum of scarring, and (2) possibly to produce some internal secretion which stimulates the uterus to produce that increased activity of the endometrium which results in the formation of a decidua in pregnancy or simple hyperæmia in menstruation.

The first of these functions is an obvious necessity, otherwise the ovary would very quickly become scarred out of all utility; the second function is at present only a theory and is lacking in definite proof.

On examining the ovary during life, in the case of a woman between thirty and forty years of age, the germinal epithelium

plus the dense stroma (tunica albuginea) immediately below it produce an appearance over the organ like skimmed milk. Follicles in all stages of development will be noticed and perhaps one that has only just ruptured. At every ovulation a follicle matures and rises to the surface of the gland, and this goes on from the period of puberty to that of the menopause. It is probable that other factors than that of simple distension producing bursting of the follicle. There is reason to think that the involuntary muscle fibres of the ovarian stroma and increased congestion also play a part. Further, the most bulging part of the swollen follicle is eventually cut off from its blood supply, necrosis follows, and at a point called the *stigma*, the tissue gives way. The ovum, with its attached corona radiata, is pitched into the abdominal cavity in a flood of liquor folliculi, and in some mysterious way is guided therefrom and into the mouth of the Fallopian tube, possibly by means of the ovarian fimbriæ, or possibly by some suction action of the abdominal ostium of the tube, produced by the current of lymph originated by the tubal cilia.

It is in the ampulla of the Fallopian tube that after a fruitful coitus the ovum meets the spermatozoon, a small cell ($\frac{1}{300}$ inch) with a flat oval head and a cylindrical body, ending in a long tail, which forms four-fifths of its whole length, and which is able to propel it in any direction at a speed of about one inch in ten minutes.

The spermatozoon can live in the uterus or tubes for a fortnight or longer after its entry, and during the early portion of that time may fertilise any ovum with which it comes in contact.

The Vagina is the communicating canal betwen the uterus and the vulva. It runs at an angle of about 60° to the horizontal and lies between the bladder and the rectum. It has an anterior and a posterior wall, a roof composed of both walls plus the uterine cervix, and a floor formed by the hymen. The urethra is closely attached to the lower portion of its anterior wall, and the bladder somewhat loosely to the upper portion.

Round the cervix the vaginal roof is arched, and anterior and posterior, and right and left fornices are described. The posterior is much deeper than the others, and just above it, abdominally, lies the pouch of Douglas. The bladder is situate

a little above the anterior fornix, whilst around the lateral fornices is the cellular tissue in the bases of the broad ligaments. The anterior wall is about 3 inches long and the posterior about 4 inches. Both walls exhibit transverse folds or rugæ, and sometimes there is a median longitudinal elevation in each (median vaginal column), the appearance then resembling the *arbor vitæ* of the cervix.

At the lower end of the vagina is the *ostium* (or *introitus*) *vaginæ*, marked by the hymen in the virgin or simply concealed by the labia in cases where the hymen has disappeared. The relation of the ureters to the cervix uteri and the vaginal fornices is important. At the level of the external os the ureter is only $\frac{3}{8}$ inch from the cervix. From the external os to the point where the ureters enter the bladder the distance is $1\frac{1}{8}$ inches (3 centimetres). The ureters, therefore, are in close proximity to the vaginal fornices, and in all operations in this locality the greatest care must be taken to avoid injuring them.

The vaginal walls consist of (1) several layers of epithelium varying from squamous on the surface to cylindrical lower down, (2) sub-epithelial connective tissue raised into papillæ, (3) muscle layers of circular and longitudinal fibres. The vaginal mucous membrane contains no glands, but may exhibit a few depressions or pits from which mucus may be extruded.

The vaginal secretion is mainly a transudation (derived from the blood) through the epithelium, and contains a number of shed epithelial cells. In appearance it is generally a thin flaky white or creamy substance, strongly acid to litmus paper, and accumulating chiefly in the fornices. In pathological conditions, during and just after menstruation, and for a few weeks after parturition, the secretion is either neutral or faintly alkaline in reaction. In the normal secretion the vaginal bacillus of Döderlein is constantly found, and is said to produce lactic acid during its growth by some kind of fermentation or fermentative process. A fungus known as the Monilia candida is also sometimes present. Both the vagina bacillus and the Monilia candida are absent from pathological secretions, when lactic acid is also not found. Quite healthy women may for a time harbour all kinds of bacteria and pyogenic organisms in

their vaginæ, but the lactic acid, formed through the agency of the vagina bacillus, either quickly kills them or renders them harmless. When, however, from pathological causes or otherwise the vaginal secretion becomes alkaline, the infective organisms may grow and flourish with very serious results to the patient. It is further noticed that the vagina bacillus is never found when pyogenic organisms are detected in the vaginal secretion. Since a certain number of germs, even if harmless ones, may often be present, one may say that the vagina is never an absolutely aseptic canal, and the same remark applies to the lower part of the cervix. But the upper part of the cervical canal, the cavity of the uterus and the Fallopian tubes are usually quite free from organisms and may be considered sterile. It is supposed that this sterility is due to cervical mucus blocking up the narrow passage, and also by reason of the large number of germicidal leucocytes contained in the secretions of the cervical canal at the level of the internal os. The walls being normally in apposition, the vagina can only be considered a tube when it is distended mechanically. It is capable of great dilatation, as can be imagined when it is remembered that a full-grown fœtus, weighing up to 12 pounds, has to pass through it during parturition, also that by accident or design, such varied substances as a bust of Napoleon, a flat iron, and £20 in silver have been introduced into it without much apparent injury.

The Bladder.—The walls of the bladder are composed of three coats—(1) peritoneal, (2) muscular, and (3) mucous. When empty, the organ lies behind the symphysis pubis and on section appears, with the addition of the urethra, to present a **Y**-shaped outline. When distended it may rise fairly high above the pubes, and then becomes more or less flask-shaped.

The Ureters run down from the pelves of the kidneys about 1½ inches on each side of the middle line. At the brim of the pelvis they are further apart, and in the middle of the cavity are about 4½ inches from each other. At about the level of the external os each ureter is crossed anteriorly by the uterine artery (on its way to the uterus), and at this point is only ⅜ inch from the cervix. It next lies between the bladder and the vagina and enters the bladder about half-way down the vagina,

and about 1½ inches from the cervix. The two ureteric openings are about 1½ inches apart, and with the opening of the urethra form the three corners of the trigone of the bladder. Above the ureteric orifices we have the fundus of the bladder, below them the base.

The Urethra is about 1½ inches long and runs parallel to the vagina, to which it is closely attached in its lower two-thirds and loosely in its upper one-third. It exhibits slight constrictions at the meatus and at the neck of the bladder. It consists of three coats—(1) muscular, (2) submucous, and (3) mucous. The muscular coat is arranged in two layers, an outer circular and an inner longitudinal. The muscle is plain and non-striated, but some striped fibres derived from the sphincter vaginæ are said to be found externally and to act as a urethral sphincter. The mucous membrane is marked by longitudinal ridges and lined with stratified epithelium. Urethral glands are common, especially near to the meatus; they are generally compound racemose peri-urethral glands, sometimes with dilated ducts. Two large ones, which are always well developed and situate just inside the meatus, are called Skene's glands or tubules.

The Rectum extends from the left sacro-iliac synchondrosis to the anus, and in its lower portion is loosely adherent to the posterior vaginal wall until the perineal body intervenes. The latter is a triangular fibrous mass, which measures about 1½ inches × 1 inch in size and gives the levator ani and the superficial perineal muscles a common point of insertion. It causes the anus to have a backward exit almost at right angles to the vaginal axis.

The Broad Ligaments.—These folds are continuous with the peritoneum covering the body of the uterus, and are indeed lateral extensions of it. The free upper border of each broad ligament contains the Fallopian tube, beyond the abdominal ostium of which it is continued to the side wall of the pelvis as a free fold—the infundibulo-pelvic ligament. The *ovarian ligament* which extends from the inner extremity of the ovary to the cornu of the uterus and is composed of mixed fibrous and muscular tissue, divides the broad ligament into an upper portion or mesosalpinx and a lower or mesometrium.

The anterior surface of the broad ligaments is crossed by the round ligament as it runs just beneath the peritoneum from the angle of the uterus to the internal abdominal ring. The broad ligament contains the following structures between its layers: the Fallopian tube, the ovarian ligament, the round ligament, the ovarian artery, the uterine artery, the parovarium, the ureter, Gartner's duct, and a mass of lymphatics, lymphatic glands, and cellular tissue. The term *mesovarium* is given to that portion of the posterior layer of the broad ligament which encloses the ovary and its vessels.

The Round Ligaments.—These arise from the anterior surface of the uterus and pass downwards and outwards and then forwards and upwards to the internal abdominal ring. The round ligaments correspond to the gubernaculum testis in the male.

The Cervico-vaginal Attachment.—This is a firm strong fibro-muscular junction, inseparable except by cutting. The cervix is received into a sort of cup-shaped depression of the vaginal tube.

The Utero-sacral Ligaments, which consist of fibrous tissue and muscle enclosed in a fold of the peritoneum, run posteriorly from the sides of the cervix at the level of the isthmus and below it to the anterior surface of the lower part of the sacrum. They form the upper part of the lateral boundaries of Douglas' pouch (retro-uterine pouch).

The broad ligaments are inclined at an angle of 60° to the horizontal. When the bladder is quite empty the utero-vesical pouch is more or less obliterated, and we find instead a utero-abdominal pouch. In this, intestines may be present. Intestines are never found in the utero-vesical space.

The Cellular Tissue of the pelvis is of extreme practical importance in gynæcology, as inflammation in any part of it may extend by direct continuity to the whole of the abdominal subperitoneal and peritoneal tissues. It is found chiefly in the floor of the pelvis, where it gives support to the blood vessels, nerves, lymphatics and glands, and acts as a sort of packing for the various viscera. Its communication with the extra-pelvic cellular tissue of the lower limbs is through the obturator and sacro-sciatic foramina. It communicates with

the labia majora by its investment of the round ligament. It communicates with the fatty capsules of the kidneys by its investment of the ureters. Its connection with the cellular tissue of the general abdominal cavity is through the mesentery of the pelvic colon, and its continuity with the subperitoneal tissue of the anterior abdominal wall and the iliac fossæ is direct.

There is no cellular tissue on either anterior or posterior surface of the uterus, just a little in connection with Douglas' pouch, but a large amount of it in relation to the bladder and on each side of the cervix. Virchow called this the parametrium.

The pelvic cellular tissue is partly loose and spongy, and partly hard, firm and fibrous. The latter surrounds and supports the blood vessels—arteries, veins, and venous plexuses. The softer cellular tissue of the pelvis encloses the ureter, which descends, accompanied by its own nutritive vessels, to the base of the broad ligament, where a few small lymphatic glands are often found. These glands are very frequently infected in malignant uterine disease and require removal in radical hysterectomy whether performed abdominally or vaginally.

The Ovarian Artery arises from the great aorta at the level of the second lumbar vertebra. It passes downwards on the psoas major muscle to the brim of the pelvis, where it enters the infundibulo-pelvic ligament. It is distributed to the ovary and the uterine tube, and also anastomoses with the uterine artery.

The Uterine Artery arises from the anterior branch of the internal iliac. Entering the base of the broad ligament near the lateral pelvic wall, it passes inwards to the cervix uteri, crossing in front of the ureter as it does so. Having reached the cervix a few twigs run downwards to anastomose with the vaginal arteries, but the main branch turns upwards and runs close to the side of the body of the uterus to the cornu, where it anastomoses with the ovarian artery.

From the uterine artery, where it is in contact with the uterine wall, a large number of lateral branches is given off. These anastomose in the middle line with corresponding

branches from the artery of the opposite side, and the first pair (somewhat larger than the rest) form together the *circular artery of the cervix.*

The veins carrying the return flow from this very free arterial supply form (in the broad ligament) a large venous plexus known as the *pampiniform plexus,* which drains into the ovarian vein and communicates also with the vesical and hæmorrhoidal plexuses. The ovarian and uterine arteries are also accompanied by veins throughout.

Other Vessels.—The vagina is supplied by the vaginal arteries, which arise (below the uterine arteries) from the anterior division of the internal iliac. A small artery, known as the *azygos vaginæ,* derived partly from the circular artery of the cervix and partly from the vaginal arteries, runs down the middle of both anterior and posterior vaginal walls. The vaginal, vesical and hæmorrhoidal veins all communicate freely with each other and open into the internal iliac vein. The anterior division of the internal iliac artery gives off vesical, vaginal and middle hæmorrhoidal branches and an internal pudic. The internal pudic gives off the perineal artery (which supplies the labia), the artery to the bulb, and the artery to the clitoris. The superior hæmorrhoidal artery comes from the inferior mesenteric, the middle hæmorrhoidal arises (as already mentioned) from the anterior branch of the internal iliac, and the inferior hæmorrhoidal arises from the internal pudic.

Reviewing what has already been said about the arteries and veins of the uterus we specially note—

(1) The blood-vessels run a remarkably tortuous and spiral course; this permits enormous variations in the size of the uterus without any shortage or excess of blood supply.

(2) The arterial circles (formed just within the outer muscular coat of the uterus) from which arteries run through the various muscular coats to the mucous membrane internally, ensure perfect blood supply to any portion of the uterus under almost any conditions.

(3) The venous return by a similar arrangement to that of the arteries, and also by the uterine plexuses and their

communication with broad ligament and vaginal plexuses and the ovarian veins, renders. congestion of the organ, even under any conditions of displacement, reasonably unlikely.

The Pelvic Nerves.—The sacral and coccygeal spinal nerves supply the muscles of the pelvic diaphragm and send branches to the pelvic sympathetic plexuses (which are also connected with the eleventh and twelfth dorsal and all the lumbar and sacral nerves). The lower pelvic sympathetic plexuses are two in number and situate one on each side of the vagina and rectum. Their extensive connection with spinal nerves enables one to understand the very wide range of reflex pain which may follow quite a small amount of pelvic disease. They give off branches to the rectum, bladder, ureter, vagina, tubes and ovaries, and uterus. The uterine branches run between the layers of the broad ligament, accompany the arteries to the uterus, and penetrating the muscle of the organ end somewhere near the lower part of the cervix.

The Pelvic Lymphatics.—The lymphatics of the uterus are somewhat complicated. One set from the fundus and body run outwards, join the ovarian lymphatics and drain into the lumbar glands. A small trunk, also from the fundus, accompanies the round ligament and drains into the superior group of the superficial inguinal glands. The cervical lymphatics drain into the superior group of the internal iliac glands, also into one or two small glands at the base of the broad ligament. Lymphatics from the utero-sacral ligaments drain into the sacral glands. The superior vaginal lymphatics drain into the superior and inferior groups of the internal iliac glands. The median vaginal lymphatics drain into the inferior internal iliac group, and a few trunks run into a gland on each side of the rectum and also into the superior hæmorrhoidal glands. The inferior vaginal lymphatics pass into the inferior internal iliac group also. The vulval and hymeneal lymphatics drain into the superior group of the superficial inguinal glands. All the lymphatics and chains of glands communicate freely, and the glands of both sides may become infected from a unilateral lesion.

The Pelvic Diaphragm is formed principally of the pubo-coccygeus muscle, although the ilio-coccygeus and the ischio-coccygeus also enter into its composition. But the two latter are often almost entirely membranous or aponeurotic. The pubo-coccygeus resembles a broad sling stretched between the pubes and the coccyx. To a certain extent it keeps the vagina, urethra and bladder in place, by its attachments to all these organs; it also supports the uterus. Another function of the pubo-coccygeus muscle is that of acting as a kind of sphincter for the rectum, vagina and urethra. Anatomically it is attached to the posterior surface of the body of the pubes along a line which runs to the supero-medial angle of the obturator foramen; it then proceeds backwards over the obturator internus muscle. Its fibres are inserted into the walls of the vagina, the triangular ligament, the rectum, the sphincter ani, the ano-coccygeal median raphé and the coccyx.

The Superficial Anal Sphincter arises from the coccyx and ano-coccygeal body, and is inserted into the perineal body.

The Deep Anal Sphincter encircles the anal canal immediately above the superficial sphincter.

The Vaginal Sphincter (bulbo-cavernosus muscle). arises from the perineal body, and is inserted into the corpus cavernosum and also into the dorsal surface of the clitoris.

The Erector Clitoridis (ischio-cavernosus) arises from the ischium, passes over the crus, and is inserted into the junction of the crus and corpus cavernosum.

The Transversus Perinei arises near the tuberosity of the ischium and is inserted into the perineal body, which it fixes in position. The perineal body also receives some fibres of the levator ani; it is composed of fat and muscular tissue and it serves as a wedge inserted between the vagina and the rectum to steady the pelvic floor.

The Bulbo-cavernosus and the transversus perinei of each side meet in a central point, known as the *centrum tendineum*, continuous with which is the superficial sphincter ani.

The Ichio-rectal Fossa is the space between the anal canal and rectum (covered with levator ani) on the inner side and the ischium, fascia lunata, gluteus maximus and great sacro-sciatic ligament, on the outer side. The fascia lunata encloses the

internal pudic (or pudendal) nerve and vessels which pass forward in the roof of the space lying close to the obturator internus muscle on its medial aspect.

The External Organs of Generation.

The Vulva, or Pudendum, includes—

(1) The labia majora and minora bounding the pudendal cleft.
(2) The mons veneris.
(3) The vestibule, into which open the vagina, the urethra and the ducts of Bartholin's glands.
(4) The fourchette and the fossa navicularis.
(5) The hymen partly covering the vaginal orifice.
(6) The clitoris.
(7) The perineum and perineal body.

The Labia Majora consist of skin and subcutaneous tissue. Their inner surface resembles mucous membrane but is true skin and contains sweat glands. The outer surface is covered with hair. Between the two surfaces are found fat, blood vessels, nerves, dartos muscle, and the terminations of the round ligaments. The labia majora unite anteriorly to produce the *Mons Veneris*—a subcutaneous fatty prominence over the symphysis—and posteriorly to form the *Fourchette*, or extreme anterior edge of the perineum, which, when drawn back, reveals a sulcus named the *Fossa Navicularis* or *Scaphoid Fossa*.

The Labia Minora, or Nymphæ, are also entirely formed of skin. They are continuous anteriorly with the prepuce, but morphologically arise from the inferior surface of the clitoris. Posteriorly they do not unite. *The Suspensory Ligament* of the clitoris is formed from the lower part of the anterior junction of the labia minora.

The Vestibule is a flat surface, bounded by the clitoris in front, the labia minora on each side, and the fossa navicularis posteriorly.

The Clitoris is a small erectile organ, homologous with the penis in the male and composed of two corpora cavernosa

which diverge laterally into the crura and are thus attached to the pubic arch. The two anterior portions of the bulbs of the vestibule fuse together to form the *Pars intermedia*, and this extended forwards caps the clitoris to form the Glans Clitoridis. The clitoris is partly covered by a fold of skin called the *Prepuce* attached to the labia minora, and it is also joined by the *Frenulum* to the same folds.

The Urethral Orifice is about an inch behind the glans clitoridis. On each side the small opening of the ductus paraurethralis may be noticed. The glands of this duct are believed to represent the prostate in the male.

Bartholin's Gland, or the Glandula vestibularis major, lies on each side of the vaginal opening and the minute opening of its duct can usually be seen by the naked eye.

The Hymen is usually attached to the posterior half or more of the vaginal entrance (*ostium* or *introitus vaginæ*) and has a free anterior border, in front of which is the actual entrance into the canal. The hymen is composed of very vascular connective tissue and bleeds freely when torn. It is covered on both surfaces with stratified squamous epithelium. Sometimes the hymen completely closes the vaginal introitus, when the condition is spoken of as imperforate hymen, and operative treatment may be required. Or there may be a number of small openings—the cribriform hymen. Or the hymen may be attached all round the margins of the ostium and have a central aperture or two lateral apertures.

The average thickness of the hymen is about $\frac{1}{8}$ inch and it is usually easily torn on coitus or by violence. Occasionally it is so thick and strong that it may need removal by surgical means in order to permit of sexual intercourse. Sometimes it is so elastic that penetration may be effected without any sign of laceration being found afterwards—a point of importance in medico-legal cases. In married women the remains of the hymen are usually seen as a few small shrunken folds. In parous women the folds have diminished to little tubercles which have received the name of carunculæ myrtiformes. In both married and parous women the labia minora tend to become a little larger and more pendulous, and protrude between the labia majora. In young virgins the labia minora

are not seen unless the labia majora are separated artificially. Brown pigmentation of the parts is also noticed after repeated coition even in a nullipara.

Sometimes the nymphæ become so much enlarged as to merit the appellation of the " Hottentot's apron."

The internal pudendal (pudic), a branch of the anterior division of the hypogastric (internal iliac), is the main artery of supply to the skin, the labia and the bulbs and clitoris.

The superficial and deep external pudendal (pudic) arteries (derived from the femoral artery in the femoral trigone or Scarpa's triangle) also supply the labia and bulbs.

The veins accompany the corresponding arteries, but whilst most of them run into the hypogastric vein, the superficial external pudendal joins the great saphenous vein.

The lymphatics of the vulva run into the inguinal glands, except those of the clitoris, which drain into the iliac glands.

The nerve-supply of the pudendum includes—

(1) The pudendal nerve (2, 3 and 4 sacral).

(2) The ilio-inguinal nerve (L.1 of lumbar plexus).

(3) The long pudendal branch of the nervus cutaneous femoris posterior (small sciatic nerve) (1, 2 and 3 sacral).

(4) The genito-femoral (genito-crural) nerve (1 and 2 lumbar).

Pseudo-hermaphrodism.

We have no authentic case on record in which an individual possessed both ovary and testis *with both functioning*, so that true hermaphrodism is unknown in a human person. On the other hand, we meet with cases from time to time where it is difficult from external examination to say what is the true sex.

The term Hermaphrodism or Hermaphroditism is sometimes used to denote doubtful as well as double sex, but on the whole, it seems better to employ the term of Pseudo-hermaphrodism as far as human individuals are concerned.

When the person thus afflicted is really a male possessing testicles although with a woman-like appearance, he is termed an androgynoid. Androgyny may be merely superficial or

it may extend to the internal organs. A very small penis may resemble a clitoris; failure of the two halves of the scrotum to unite results in the production of something like the labia majora, whilst the penile urethra is open and forms a groove resembling the vulva; the pubic hair may resemble that of the female; the breasts may be large and full; as a rule the voice changes to that of a man after puberty and hair grows on the face. A testis may be found in the supposed labia, but not always, as the testes may be retained within the abdomen. A case of this kind can usually be detected without much difficulty if a careful examination be made.

But if there is quite a natural-looking vulva, and, in addition, a vagina, if the individual has a man's general appearance and voice, if the pubic hair resembles that of a woman (base of the triangle of hair above, apex below), but there is a moustache and a beard on the face, if the person is attracted by females and not by males and yet is said to have menstruated—how can the riddle be solved whilst the person is alive and a search cannot be made for possibly concealed testes? No answer can be given. Other cases are recorded where a male hermaphrodite has even had an undoubted uterus and has definitely menstruated, but a testis has been found in the inguinal canal and removed by operation. The possession of a uterus is therefore not an absolute proof that the individual is really a woman.

A gynandroid is the term given to a hermaphrodite woman resembling a man, and the condition of gynandry may be just as puzzling as that of androgyny. Thus the clitoris may be very large, the ovaries may have prolapsed into the labia majora and the latter may have fused in the middle line, whilst a very small vagina opens into the urethra at the root of the clitoris—the condition resembling hypospadias in a male. The breasts may be rudimentary and hair may grow on the face. A uterus is present but may be so ill-developed as not to menstruate.

In all cases of androgyny and gynandry wherever the sex is in doubt it is considered best to bring the child up as a boy.

Menstruation.

Menstruation is the monthly sanguineous discharge from the uterus, occurring in women usually between the ages of fourteen and forty-four. This monthly flow is attended with congestion of the genital tract and hypertrophy of the uterine mucous membrane; it is related to the discharge of ova from the ovary. Long believed to have a peculiar solvent property, its powers in this respect produced the use of the word "menstruum" to mean a solvent medium.

As it is very difficult to determine when exactly ovulation takes place, the relation between ovulation and menstruation has not even yet been definitely settled. It has been proved that ovulation may occur independently of menstruation by the fact that menstrual molimina occur in women from whom the uterus has been removed but the ovaries left; the same symptoms are also noticed where the uterus is rudimentary and the ovaries normal. The term "menstrual molimina" is used to include backache, pelvic pain, headache, and other signs commonly associated with the monthly effort to establish the menstrual flow.

Menstruation depends absolutely upon the presence of fully developed and active ovarian tissue. It is suggested by some authorities that ovulation is not the exciting factor in producing menstruation, but that the latter is due to the stimulus of the internal secretion of the ovary. In support of this view the cases of pregnancy occurring before puberty, in superfœtation, during lactation and after the menopause, are cited. It is believed that an ovarian hormone (or chemical substance produced within the organ) is carried to the associated organ —the uterus—and excites there a functional activity.

Blair Bell has contributed largely to the literature on this subject and is of opinion that in addition to the hormone stimulation, calcium metabolism plays an important part in menstruation. He noted (1) that menstrual fluid contains a high percentage of calcium salts; (2) that before menstruation the calcium content of systemic blood is high, during menstruation it falls rapidly and after menstruation rises again; (3) that after a hen has laid an egg the calcium content of its blood is

low. He believes that the excretion of this calcium in the human being takes place through the epithelial cells of the uterine glands and is aided by the initial leucocytic diapedesis; also that the internal secretion of the ovaries controls the calcium excreting function of the uterus and periodic alterations in the calcium metabolism may be the cause of menstruation. Under Blair Bell's theory the monthly losses may be due to impaired coagulability of the blood owing to a lack of calcium. He notes also that menstruation does not begin until enough calcium has been stored up in the bones to supply all the needs of the skeleton. Further, in the disease known as osteomalacia, where the bones gradually become flexible and brittle, owing to extensive decalcification, removal of the ovaries by operation may stop the progress of the complaint —the suggestion being that abnormal calcium excretion (by the absorption of calcium from the bones) is produced by irregular and abnormal activity of the ovaries.

Eden and Lockyer, in their latest work, point out the possible important relationship between the ovaries, certain of the endocrinous glands and the whole genital system. These special endocrinous glands are the thyroid, the pituitary, the adrenals, and it may be others (such as the thymus and pineal) also. They call attention to the facts that:—(1) removal of the ovaries produces changes in the other endocrinous glands; (2) disease of the endocrinous glands produces disease in the genital organs; (3) after removal of the ovaries extracts of other endocrinous organs may modify the usual effects; (4) during pregnancy certain definite changes take place in some of the glands.

As regards the Thyroid, it often enlarges in pregnancy; exophthalmic goître sometimes follows removal of the ovaries; obesity and its associated amenorrhœa are often cured by thyroid extract; goître affects more women than men; in rabbits the gland enlarges during pregnancy and after oöphorectomy, and removal of the thyroid causes uterine atrophy.

As regards the Pituitary Gland, it also is said to be enlarged during pregnancy and after oöphorectomy; partial removal of the pituitary in animals is said to cause uterine atrophy and

to be followed by what is termed *distrophia adiposo-genitalis*, a condition of stunted growth, genital atrophy and obesity (Fröhlich's syndrome).

An extract of the infundibular portion of the pituitary gland has been shown by Blair Bell to stimulate the parturient uterus and unstriped muscle elsewhere—notably the intestinal coats and small blood vessels.

As regards the Adrenals, a tendency to masculinity is said to be produced by abnormal activity of these glands and during pregnancy alterations have been noted in their structure. Removal is said to produce uterine atrophy.

From the various facts recorded above it would seem that the various endocrinous glands may (1) help one another out of difficulties, *e. g.* the pituitary and thyroid share some of the ovarian functions; (2) oppose one another, *e. g.* the adrenals are apparently antagonistic in function to the ovaries; (3) combine to produce a menstruation that is in harmony with the needs of the individual.

Menstruation in this country usually begins at about the age of fourteen years; in hot climates it commences earlier, but this is probably more due to the influence of race than temperature, and the statement formerly accepted that women begin to menstruate later in cold climates than in hot ones is now disputed, for the natives of some tropical countries have been proved to start much later than the natives of certain icy-cold regions—thus the Somali women do not start menstruating until about sixteen years of age, whilst the women of the Arctic Indians begin at twelve and a half years (Eden and Lockyer). Whilst taking fourteen as an average age for Great Britain, it must not be forgotten that instances of menstruation being delayed without any apparent cause and in quite healthy persons up to twenty are not very uncommon, and cases of precocious menstruation at ten are also met with. Girls of the middle and upper classes leading easy lives and mixing in rather artificial society appear to commence earlier than simple country-bred girls who lead more or less open-air lives and are not stimulated sexually by too much excitement and higher education. Heredity has a marked influence also, and the daughters of women who commenced to menstruate at an early

age will probably do the same as their mothers. The average girl or woman will menstruate once every four weeks; the flow usually lasts four or five days and the total amount of blood lost during that period is about 4 or 5 ounces, or 1 ounce per day. These figures vary somewhat; the menstrual rhythm may be anything from three to five weeks in a perfectly normal individual; the flow may last from one day to eight or nine days, and the total quantity lost may vary from a couple of drachms to 8 or 10 ounces, without the least injury to the person's health. The first few periods are quite commonly somewhat irregular, but once the flow has become properly established it should be accepted in its periodicity, quantity and quality as the normal for that particular person—provided, of course, that she is healthy and reasonably cared for.

The discharge on the first day is usually a light brown in colour, on the second and third days deep red, fourth day a deep pink; and after the flow has stopped a yellowish and creamy discharge for a further day or two is not uncommon.

The composition of menstrual fluid is mainly red and white blood corpuscles, epithelium from the cervix, vagina and endometrium, and mucin. The blood is always fluid, it does not contain fibrinogen or fibrin-ferment (both of which bodies, according to Blair Bell, are removed by the uterine endometrium during the passage of the blood through it), but it shows a considerable amount of lactic acid and calcium salts. If the flow is excessive or too rapid, clots may form, and occasionally very small clots may be noted in normal menstruation.

According to Whitehouse menstrual blood clots inside the uterus, but this clot is dissolved as it passes through the cervix and vagina by an enzyme capable of digesting it and secreted by the uterine glands (thrombolysin). It is interesting to note that in monkeys an intrauterine clot is always formed in menstruation. The process of blood coagulation should also be borne in mind, which is as follows:—the plasma contains calcium salts, fibrinogen (a blood globulin from which fibrin is mainly derived) and thrombogen (a body of unknown composition). When blood is shed this thrombogen is acted upon by a zymoplastic (ferment-forming) substance derived from the tissues and called thrombokinase, and these two, in the presence

of calcium salts, form a new substance, thrombin, the hypothetic fibrin-ferment of the blood. Thrombin plus fibrinogen produce fibrin, the essential factor in blood clotting. Whitehouse is of opinion that, in the uterine cavity, blood clots with extreme rapidity due to an excess of thrombokinase; also that menorrhagia in some cases may be due to deficient production of thrombokinase or excessive production of thrombolysin.

Symptoms of Menstruation.—A perfectly healthy normal woman, theoretically, should experience no pain or even discomfort during menstruation, but as a matter of fact, most women complain of some disability and many of actual pain. It is usual for some premonitory symptoms to precede the flow, and amongst these pelvic discomfort, backache, headache, and malaise are most commonly complained of. Other signs are irritability of temper, depression of spirits, frequent micturition, eruptions on the skin, swollen breasts, and dark lines under the eyes; the vaginal and cervical mucous membranes are congested and darkened, the labia are congested, the cervix is softer to the touch. The temperature rises perhaps half a degree, the excretion of urea is increased, vascular tension is raised, and the pulse rate is quickened. When the flow is well established, a fall in each of the above to below normal is noted. After the flow is over the person usually feels at her best and has increased mental and physical powers. The uterine changes during menstruation are briefly as follows: A few days before the flow starts the endometrium increases in vascularity, and the mucous membrane becomes thicker; the stroma is œdematous and its cells increased in number; the glands are enlarged and convoluted, their cells showing signs of active secretion; blood serum passes out of the capillary vessels, and in later stages the blood corpuscles themselves. The effect of the congestion and œdema is to thicken the endometrium to $\frac{1}{4}$ inch or even more. When menstruation has actually begun, blood escapes freely from the capillaries, either by diapedesis or by actual rupture of the vessel walls, and passes into the spaces between the stroma cells of the endometrium. In this way, sub-epithelial hæmatoma are formed, and as the epithelium is lifted up from its bed it loses its sources of nourishment and gives way in places. This allows the blood to make its

way into the glands or into the uterine cavity. Muscular contractions expel the blood into the vagina (possibly blood clots in the uterus, and is afterwards dissolved as already explained). Only a small amount of epithelium and glands from the endometrium is lost during the hæmorrhage, the menstrual discharge consisting for all practical purposes of blood, mucus and cast-off epithelial cells. The reaction of the fluid is alkaline, and has an odour faintly suggestive of marigolds (Johnstone). After the period has stopped the mucous membrane is much thinner and shrunken from the depletion. The cells of the glandular epithelium quickly grow, divide, and replace the lost coverings. Blood in the stroma is absorbed and the blood-vessels resume their normal size. This period of post-menstrual renovation usually takes six or seven days. During menstruation there is a definite congestion of all the pelvic sexual organs and the secretions from the cervix, vagina and vulva are considerably increased. After menstruation this congestion quickly disappears, and in a few days the condition is again normal. A good deal of discussion concerning the amount of endometrium lost in menstruation has taken place for many years past. Sir John Williams maintained that the walls of the blood-vessels undergo fatty degeneration, burst, and carry away most of the endometrium, so denuding the muscular tissue, and that a new endometrium is formed from the round cells between the muscular fibres. Kundrat and Engelmann (working together) and Leopold examined a large number of uteri from post-mortem cases and agreed that merely surface epithelium is lost. Möricke, who curetted the uteri of living women at various stages of menstruation and microscopically examined what he removed, asserts that none of the mucous membrane disappears. Bland Sutton, who examined the uteri of menstruating monkeys, also found no loss of epithelium. Heape, in his valuable work, *The Menstruation of Sennopithecus Entellus* (1894), gives the results of the examination of fifty specimens, and reports: (1) stroma increased and blood-vessels engorged; (2) blood-vessels undergo amyloid (not fatty) degeneration, and the leucocytes increase in the blood-vessels below the surface, probably from the presence in the blood of some

noxious material; (3) the blood-vessels rupture and the superficial layer of the mucosa is cast off; (4) new epithelium is formed partly from the stroma and partly from pre-existing epithelium, the leucocytes taking no part in the new formation.

With regard to ovulation, Heape found only two specimens with a recent corpus luteum. In this connection it may be as well to state that up to the present we have no definite proof as to which ovum is fertilised when pregnancy occurs, the ovum of the last menstruation or that of the first period missed.

Vicarious Menstruation, or Xeromenia, is a condition in which normal menstruation is replaced by hæmorrhage from mucous membranes other than the endometrium. A large number of such cases has been recorded, but many of them, on careful investigation, appear to be merely accidental occurrences and due to some disease of the organ from which bleeding occurred. Cases, for instance, of bleeding from the lungs where phthisis is present, from the stomach where ulcer is suspected, from the breast in cancer, and from the skin in ulceration, are all more probably due to disease than to vicarious menstruation. Cases, however, where menstruation is totally absent, and bleeding happens, say from the nose, and, accompanied by signs of general malaise, comes on regularly every month and lasts for three or four days on each occasion, may reasonably be classed under this heading.

The Object of Menstruation.—The menstrual fluid probably removes some product or products which are unnecessary or harmful to the system unless pregnancy is present. In the latter condition the calcium usually eliminated in the flow is used for the purpose of building up the embryo, and the numerous organic compounds which are derived from the endocritic organs and also eliminated in menstruation are probably employed in pregnancy to stimulate fœtal development along certain definite lines. Menstruation should therefore be regarded as a preparation for pregnancy. If the ovum is fertilised the prepared endometrium is ready to nourish it and stimulate its growth; if the ovum is not fertilised the preparations are scrapped for the time being and the reception chamber is again prepared later on.

The reasons for a rhythmic reappearance of the flow every

four weeks or thereabouts are quite unknown. But neither do we know why the heart beats seventy or eighty times a minute nor why we breathe fourteen or fifteen times in the same period of time. With certain animals a Graafian follicle only ruptures during coitus, and this would certainly seem a much more economical method of dealing with the matter. We may assume, however, in man, that the nerve centres are worked up to a point of nervous discharge at regular intervals, and when the discharge takes place nervous energy is liberated, which stimulates the uterine mucosa to action. Another explanation may be entertained, which is that the internal secretion of the ovary is poured out into the circulation until a certain degree of concentration is reached. At that point the uterus is stimulated to congestion and hæmorrhage.

NOTE.—The terms *menarche* (onset of menstruation), *menacme* (full menstrual life), and *menopause* (cessation of menstruation) are commonly used to express shortly the chief periods of the sexual life of woman.

CHAPTER III

PUBERTY

THE term " puberty " is usually employed to denote that period in the life of a young girl when she begins to assume the mental and bodily characteristics of womanhood. Amongst these are included alterations in the sexual organs, menstruation, the development of the breasts, the rounded outlines of the body, the growth of hair on the pubes, increase of fatty tissue in the same region, alteration of the voice, restraint in social intercourse with the opposite sex, and mental changes of an extensive and peculiar nature.

The onset of menstruation is the most important feature of puberty.

The initial flow is usually preceded by pains in the lower part of the back and in the loins, dragging sensations in the pelvis, tired feelings in the legs, headache, neuralgia, irritability of the bladder, sensations of heat or chilliness with flushing or pallor of the face, nervousness, depression, and various other forms of neuroses. Sometimes gastro-intestinal symptoms are noticed such as dyspepsia, epigastric pain, flatulence, loss of appetite, diarrhœa, constipation, and so on. At others, vertigo, palpitation and irregular action of the heart are remarked. Occasionally some degree of moral aberration is a disagreeable feature requiring attention. These various symptoms may occur two or three times at monthly intervals before menstruation actually begins, or may immediately precede the first flow. During the year before menstruation starts the girl usually grows rapidly and shows a considerable increase in size and weight, much more in proportion than in the case of a boy at the same age.

The reflex disturbances which are exhibited at the first menstruation are due in large part (1) to the hyperæmia of the ovaries which is associated with the ripening and development of the Graafian follicles, and (2) to the mental effect upon the

young girl of the peculiar changes which are taking place in her body—changes that cannot fail to be noticed and to produce a certain amount of apprehension and distress. The actual loss at the first period may be more or less ordinary, or profuse, or scanty. Not infrequently after a normal commencement, the next two or three menstruations may be scanty, but in some instances the reverse is the case and the losses may be profuse and debilitating, especially amongst working-class girls who have little or no opportunity of obtaining the extra rest and comfort which are desirable.

Amongst all classes it is especially important that proper parental advice and supervision should be given to the young girl just entering upon womanhood. There is nearly always a tendency for the thoughts and impulses to turn in a sexual direction, and if hygiene is neglected and no restriction placed upon association with the opposite sex, there are undoubtedly risks to be faced. The perusal of certain kinds of light literature, especially the modern type of novel dealing with sexual matters, is very unsuitable for young girls, and too much theatre and cinema going is to be deprecated. Even female companionship should be carefully selected and supervised, for bad habits are easily copied and sexual perversions very quickly acquired, whilst their natural consequences are most difficult to cure.

The mother should see that the girl's external genitals are kept scrupulously clean, but should warn her against undue fingering of the parts. The smegma which is secreted by the sebaceous glands of the labia minora requires carefully washing away or it may become offensive and irritating and in itself lead to habits of masturbation. Where the clitoris is unusually large, sexual malpractices are especially liable to be developed and must be guarded against. In very rare cases the appendage may even require removal, but the condition of enlargement to such a degree as to demand operation is practically confined to native Eastern people and savage tribes. The latter sometimes also practise a process known as infibulation, which consists in cutting the inner surfaces of the labia minora and then stitching the rawed edges together so as to leave only a very small aperture. Before marriage the

opening is enlarged sufficiently to admit the husband's penis, and a further enlargement is made during pregnancy and just before parturition.

The care of the hymen is a matter of some importance as a sign—though not a positive one—of virginity, and the mother should caution her daughter against the introduction of anything whatsoever into the vagina. No moral harm could follow such a caution carefully expressed, and cases are met with where schoolgirls have severely damaged this membrane out of pure curiosity and through the influence of bad example without any sexual ideas whatever.

For medico-legal reasons it is perhaps as well to remind the practitioner that in some cases it is possible for complete coitus to take place without any discernible tear or rupture of the hymen. This may occur where the male organ is small and the hymen unusually elastic and provided with a large central aperture. Incomplete coitus frequently occurs without any rupture, the penis merely pushing the membrane inwards.

It is, of course, possible for impregnation to take place without any flaw in the integrity of the hymen being discoverable, and although on examining a case of suspected rape or immoral intercourse the existence of a perfect hymen generally discounts the suggestion, it is not safe to entirely exclude these conditions, and the wise practitioner will not do more than make a simple statement of what he sees on careful examination. The hymen may be injured or destroyed by an accident, such as a fall upon some pointed object or article of furniture or convenience: it may also be eroded away by ulcerative processes due to diphtheria, syphilis, or other local infection; but all such occurrences are extremely rare and must be carefully investigated before they are accepted as correct explanations in medico-legal cases. In this connection it should also be remembered that a small tear produced by defloration may heal so thoroughly as to leave only a minute scar that can easily escape notice altogether unless carefully searched for.

The various types of uninjured hymen may be classified as follows:—

(1) *Imperforate*, where the membrane exhibits no opening

whatsoever, and where in consequence after puberty the vagina, uterus and tubes may all become distended with menstrual blood.

(2) *Pin-punctured*, where only a very minute opening is to be found.

(3) *Annular*, where a round or oval aperture is seen, sometimes small, sometimes so large as to give rise to a condition known as " absent hymen."

(4) *Heart-shaped*, where the opening resembles the cardiac outline.

(5) *Semilunar* or *crescentic*.

(6) *Cribriform*, with several minute openings.

(7) *Septate*, or *bridged*, where there is a band or bridge of membrane dividing the aperture into two portions.

(8) *Infundibuliform*, with a projecting funnel like the invaginated end of a glove finger.

(9) *Lobulated*, with overlapping lobes and a small slit between them.

(10) Thick fleshy hymen, tough and resistant.

(11) Thin membranous hymen, very easily torn.

(12) Elastic hymen, which stretches so much as to remain untorn until parturition occurs.

Whilst in most civilised countries the possession of an intact hymen is certainly prized as a mark of virginity, it is worth a passing thought that amongst certain savage tribes the right of defloration belongs not to the husband on the bridal night, but to either the headman of the tribe or the local priest or witchcraft doctor.

When examining the vulva, if the following points are well-marked one might suspect masturbation: enlarged reddened clitoris; dark-coloured, tough and thick nymphæ protruding between the labia majora; reddened edges of the vaginal orifice; labia majora flaccid; hymen flaccid and perhaps slightly lacerated.

In a normal vulva the hymen is fairly tense and exhibits no lacerations; the labia majora are elastic and in close apposition; the vaginal orifice and vestibule are narrow and the parts pale pink in colour; the nymphæ are very little pigmented and are well covered by the labia majora; the clitoris is small and only

noticeable on separation of the parts; the vagina itself if examined will be found narrow, tense and very rugose.

It is at the time of puberty that the breasts first begin to assume the rounded protruding form so characteristic of graceful womanhood. They slowly enlarge and diverge from each other outwards. The nipples are rose-pink in colour and usually small, often depressed by badly-fitting corsets. The breasts are firm and elastic in consistency and should stand out without any drooping unless they are unusually large or the girl is either very stout or very thin. Just before the first menstruation the breasts are often somewhat sensitive and slightly turgid; at the same period all the external genitals are noticeably swollen and congested and the clitoris may be a little enlarged by the engorgement. These various physical alterations, together with the increase of subcutaneous fat over the pubic region to form the mons veneris and the growth of hair in the same locality, all tend to call the attention of the young girl to her sexual organs, and the ensuing ovarian stimulus followed by menstruation frequently arouse erotic impulses and awaken the hitherto dormant sexual desires.

If the ovarian follicles ripen at a much earlier period than normal, the sexual organs develop earlier also. A few rare cases are recorded where menstruation began during the first year of life, and quite a number where the flow commenced before the age of six. The latter were all characterised by precocious physical development, the girls exhibiting well-formed breasts, hair on the mons veneris and an adult form of the pelvis.

Precocious menstruation and puberty, in their common form, begin two or three years before the normal. They are associated with precocious development of the body generally, but not as a rule with a corresponding early development of the intellectual faculties; indeed the latter are frequently a little under-developed. It is a fact that girls whose sexual organs develop unduly early have frequently strong sexual desires and therefore require very careful supervision.

The reverse condition—delayed puberty and menstruation—is probably more common. The girls, then, do not start with their periods for two or three years after the normal age, and

usually exhibit marked under-development of the sexual organs. The uterus is smaller than normal and of the infantile type; the ovaries are small and flaccid; the vagina is narrow and short; there is little or no hair on the pubes; the breasts are small and undeveloped, and the nipples rudimentary. The girl herself may appear at first sight well-developed bodily, but on closer investigation it will be found that her size is merely due to excess of subcutaneous fat, and that her muscles are flabby and under-developed, whilst the pelvis has not taken on its adult form and there is little actual mammary tissue in the breasts. She is also frequently chlorotic and of delicate constitution.

Instances of menstruation delayed until the age of twenty and up to twenty-six or seven are not infrequently recorded, and the explanation is probably that either the ovaries or uterus or both have been delayed in development. The exact reason for this delay is, however, not always easy to determine. It almost goes without saying that whenever menstruation has failed to exhibit itself for some time after the customary age, an examination should be made to ascertain if such conditions as imperforate hymen or imperforate lower part of the vagina be present. These abnormalities, if not speedily remedied, may result in total destruction of the internal generative organs, and the importance of a correct diagnosis is therefore obvious. Menstruation once established may or may not continue with monthly regularity. Where there is imperfect development of the reproductive system the initial establishment of the flow may be followed by a period of amenorrhœa, which may continue for several months and be followed by one or two regular periods and then another lapse, and so on. Eventually the organs may attain full development and conditions become normal, or, on the other hand, under-development may persist and menstruation remain continuously unsatisfactory and irregular.

Temporary amenorrhœa may result from shock, fright, fear of pregnancy (after exposure to the risk, or sometimes, from lack of knowledge, after mere intimacy without coitus) exposure to cold and chills especially just before the period is due, and after changes of residence or occupation.

As illustrations of temporary suppression of the menses due to one or other of the above-mentioned causes I might quote the following from personal observations :—

(1) Amenorrhœa for six months in a girl of 16 who began to menstruate at the age of 14 and had been quite regular up to the sudden death of her mother from a tramway accident.

(2) Stoppage of the periods for nine months in a girl of 16½, regular from the age of 15, due to fright caused by being chased by a savage dog.

(3) Cessation of menstruation for four months caused by fear of pregnancy after coitus, in a young girl of 17 previously regular since the age of 13½ years.

(4) One period missed by a girl of 16 previously regular for two years, who had been fondled about the vulva by a young man without coitus and who feared that pregnancy might result. Reassurance satisfied her mind and menstruation followed when next due.

(5) Total amenorrhœa for twelve months in a girl of 17 previously regular for three years, following bathing in cold sea-water the day before her period was due.

(6) A young girl aged 17½ caught a severe chill by getting her feet wet and her clothing very damp whilst proceeding to business. She was obliged to remain without changing her attire in a rather cold office for the whole day, and was menstruating at the time. Menstruation ceased at night although it had only started the day before and as a rule lasted four days. Amenorrhœa was complete for eighteen months. She had previously menstruated regularly since the age of 16. When the flow was re-established she suffered from scanty and painful menstruation for several years afterwards. The condition was cured only by curetting: medicines and hygienic treatment having no effect.

(7) A girl aged 15½, previously normal for two years, removed from the country to town and took a situation in an office. Menstruation gradually became irregular and scanty, and finally ceased altogether for nine months although her general-health was good. There were no molimina. Medicinal treatment having no effect I advised her to return to the country. She did so and menstruation immediately returned. After six

months of regularity she decided to resume her occupation in the city. She had two normal periods and then again became amenorrhœic, but experienced the usual molimina monthly. As I lost sight of this case I do not know the ultimate result, but imagine that in the course of time she would become accustomed to the changed environment.

(8) A young woman aged 18½, regular from 16½, took on hard manual labour at an acetylene welding works during the war. She had previously lived an active life and had done a good deal of ordinary house-work. Amenorrhœa followed at once but the molimina were well marked. Imbued with a spirit of patriotism she persisted in her task for nearly eight months, when she was obliged to give it up owing to a complete breakdown in health. Menstruation returned after a couple of months' rest. She was, however, irregular for nearly a year. The sexual organs were quite normal and there was no other cause for the amenorrhœa than the change of occupation.

(9) A similar case was that of a domestic servant aged 17, regular from 15½, who became a factory operative and suffered from amenorrhœa for six months as a result.

One of the commonest causes of amenorrhœa in early adult life is chlorosis. Menstruation begins at about the ordinary age and then gradually becomes scanty and irregular, and finally stops altogether for a time or is replaced by a kind of watery discharge faintly tinged with blood. Chlorotic girls, as previously mentioned, are frequently fat, and consequently give a false impression of good development. Their pallor is, however, peculiar and characteristic, and they suffer from a variety of associated troubles besides the amenorrhœa, viz. lassitude and general weakness, headache, fainting attacks, dizziness, palpitation, dyspepsia, constipation, depression of spirits, and so on, whilst a microscopic examination of the blood will at once confirm the diagnosis.

Menorrhagia, or excessive menstrual loss, is sometimes noticed during the first few monthly periods, after which the condition usually becomes normal. If menorrhagia persists it is generally in the form of lengthened periods rather than as short but profuse losses. It may be due to some form of auto-intoxication leading to a variety of endometritis, and

accompanied by degenerative and inflammatory changes in the uterus. The exact nature of this auto-intoxication is uncertain, but chlorosis probably plays a part in its production, and it is easy to understand how simple lack of cleanliness would assist in producing it. During menstruation the pubic hair becomes soiled with blood and the undergarments also. Unless the parts are washed and the linen changed, putrefactive bacteria grow in abundance in the very suitable media provided for them. Some of the germs make their way through minute cracks and abrasions in the vulva and enter the circulation. Toxins are produced and lead to inflammatory changes in the sexual organs, for which they seem to have a selective preference—possibly because these are directly as well as indirectly irritated, the direct infection following a vulvitis and vaginitis of septic origin. The latter frequently result from friction due to constant movement of the parts in those who have to do a good deal of walking, running about, working a foot sewing-machine, riding, dancing, skating, and so on; or they may be due to long-continued masturbation.

Menorrhagia is often found during influenza, scarlet-fever, measles and febrile disorders of a similar nature; it may also continue for some time after the infection has entirely cleared away.

Nearly all forms of menorrhagia are associated with changes in the endometrium. These are usually temporary in nature, but sometimes, chronic endometritis develops and is very resistant to treatment. It is characterised by a kind of mucous discharge which is thin and milky-looking when the body only of the uterus is affected, and greenish-yellow when the cervix is inflamed. The discharge stiffens the linen and occasionally has an offensive odour. On inspection of cases probably originating from masturbatory vulvitis, the vulva is seen to be generally reddened and often shows little nodular excrescences dotted here and there on its inner aspect; the sebaceous glands are increased in number and size; clitoris enlarged; hymen usually intact; nymphæ enlarged and deeply pigmental. Masturbatory cases are nearly always nervous and hysterical in temperament, difficult to examine and deal with, frequently complain of ovarian pain and dysmenorrhœa in addition to

menorrhagia, and on bimanual examination usually exhibit an enlarged retroflexed uterus, whilst intrauterine exploration will reveal an enlarged cavity and much thickened endometrium.

A common enough cause of the retroflexion is chronic self-enforced retention of the urine, this bad habit leading naturally to distension of the bladder. The condition is further aggravated by chronic constipation, the accumulated fæces in the lower part of the rectum pushing the cervix forwards. The tendency to chlorosis which is present in a large proportion of all young girls at the period of puberty is not generally provocative of menorrhagia, but rather of amenorrhœa; in those cases, however, where excessive losses are noticed, the theory of auto-intoxication plus malnutrition of the uterine tissues leading to inflammatory and degenerative changes has certainly some grounds for its possibility in fact.

Chlorosis is essentially a disease of puberty and early adult life. By some authorities it is regarded as an ovarian auto-intoxication; by others as a disturbance of the internal secretion of the ovary leading to vaso-motor irregularities. Insufficiency of the hæmatopoietic organs, or a lack of harmony between the productions of these organs and the demands made upon them at the period of puberty, are other explanations. Imperfect development of the internal genital organs being frequently met with in chlorosis, the disease is also put down to this cause. The wearing of tightly-fitting corsets is said by some authorities to produce pressure and tension upon the abdominal sympathetic plexuses and so lead to chlorotic symptoms; whilst others, again, consider that primary defects in the vascular apparatus and in the blood itself are always present in girls who develop the malady, but that these deficiencies do not exhibit themselves to any noticeable extent until the onset of puberty makes an additional demand upon the system. The old view that chlorosis was due to the non-satisfying of sexual instincts and that it could always be cured by marriage, appears to have no supporters at the present time. It is true that few adult married women suffer from chlorosis, but one must not forget that as a rule they have married after the chlorosis has been cured by other means. Further, chlorotic girls may indulge in promiscuous

sexual intercourse without being cured of their malady, or if married when very young the chlorosis continues in spite of marital relationships constantly taking place.

The alleged origin of chlorosis in early masturbation is also disproved by careful investigation, although one readily admits that the two conditions may frequently coexist.

Chlorosis being characterised by a deficiency in the hæmoglobin richness of the blood, together with an actual diminution in the number of red blood corpuscles, the occurrence of such symptoms as shortness of breath, palpitation on exertion, pains over the cardiac region, dyspepsia, nervous irritability and hysteria can be quite well understood. The albuminuria not infrequently met with in young girls at the age of puberty is also in most cases due to chlorosis, and may be explained as due to malnutrition of the renal glomeruli. Following this, ocular paralysis, retinal hæmorrhages and retrobulbar neuritis are sometimes met with. There is no doubt that a certain number of cases of chlorosis escape recognition as such, and that in consequence many actual manifestations of the complaint are put down to disturbances of puberty and menstruation. The typical chlorotic pallor is not always present, and, as already mentioned, the patient may appear fat and well nourished. An examination of the blood is not always made, otherwise a 50 to 75 per cent. reduction in the hæmoglobin with a 25 to 50 per cent. reduction in the number of the red blood corpuscles would at once reveal the nature of the case. On the other hand, certain cardiac and nervous troubles appearing at the period of puberty in somewhat anæmic girls may be put down to chlorosis when this is not actually present. Thus, very rapid growth, physical strain, and unsuitable clothing may produce a condition of cardiac hypertrophy affecting particularly the left ventricle and manifesting itself by severe palpitation, vertigo, shortness of breath and a feeling of fullness in the chest. Again, the onset of the first menstruation may produce pallor, nervous and irregular action of the heart, shortness of breath and considerable weakness and lassitude, the whole condition bearing a striking resemblance to chlorosis. In cases where dilatation of the heart with murmurs due to mitral regurgitation are present it may also

be difficult to decide whether the condition is one of primary chlorosis, or primary heart disease, or the result of cardiac strain following a too rapid growth of the body plus the added disturbances associated with the onset of menstruation. The importance of a careful examination of the blood in all doubtful cases is therefore obvious.

In considering cardiac disturbances at the period of puberty it is noteworthy that it is at this time that the heart attains its most rapid development, whilst the arteries remain comparatively small in diameter. Hence the blood pressure is higher at puberty than at any other time in woman's life, and consequently cardiac lesions are more easily produced.

Disorders and diseases of the nervous system are naturally somewhat common as a result of the manifold changes taking place in the organism during the critical period of transition from asexual to sexual life. Particularly is this the case in those who inherit nervous tendencies or are placed in unfavourable surroundings. The following neuroses are frequently noted: hysteria, epileptiform attacks, hemicrania, neuralgia, depression of spirits, longings for extraordinary kinds of food and drink, bulimia, kleptomania, pyromania (an insane desire to set fire to things).

Hysteria in a mild form is certainly very common, and exhibits itself by globus hystericus, clavus hystericus (a sensation of a nail driven into the head), unreasoned fits of laughing and crying, and outbursts of passion.

Melancholia and mania sometimes begin about the time of the first monthly loss: they are usually recovered from, but in some cases may become permanent.

Chorea may develop and be associated with irregularity in the periods, passing away as these become normal. Some cases of chorea appear to have a definite relationship with abnormal conditions of the sexual organs, especially of the ovaries, which are tender on pressure.

Epileptiform attacks closely resemble an ordinary epileptic seizure and require careful investigation, since the latter condition is certainly the more common. If the attacks do not speedily pass off, but continue to recur with each menstrual period, it is much better to treat them as true epilepsy and to

adopt suitable medicinal measures. Where there is screaming and convulsive movements without any actual loss of consciousness, the condition is probably hysterical; but if there is real loss of consciousness, pupils dilated and insensitive to light, tonic and clonic spasms, bitten tongue, and no subsequent recollection of what has passed, it is practically certain that the seizure has been one of true epilepsy.

Mental disturbances of a varied character sometimes appear to come on with each menstrual period: they may amount to nothing more than a vague restlessness with slightly abnormal behaviour, or the patient may be definitely deranged and commit the most extraordinary acts. As a rule the subjects of this condition suffer from irregular menstruation or dysmenorrhœa, and when the periods become regular and normal they recover. Certainly some of the sufferers are quite irresponsible for their actions during menstruation. The subject has important medico-legal aspects and deserves attention for various obvious reasons.

Masturbation is often developed during puberty, and it is easy to understand that slight irritation of the external sexual organs from such causes as vulvitis and urethritis of simple origin may prove the starting-point in the formation of the habit at an age when everything seems to be concentrated into sex. The latter portion of the last sentence is not written as a catch-phrase: in many instances it is an incontestable fact. It must also be remembered that the tendency to psychical masturbation is quite common at puberty: there is here no manipulation of the genital organs, but such a concentration of thought upon sexual matters that an orgasm is produced by stimulation of nerve centres alone. Erotic day-dreams as well as nocturnal sensations may sometimes become so persistent and excessive as to lead to pronounced neurasthenia accompanied by ovarian pain, general debility and lassitude, sacralgia, irritable bladder, hyperæsthesia of the external genitals, and various hysterical manifestations, together with dyspepsia, palpitation, headache and insomnia.

Digestive disturbances are so frequently met with at puberty that many authorities consider them to be part and parcel of the ordinary troubles of that period. They include simple

dyspepsia, nausea after food, loss of appetite, excessive appetite, perverted appetite, chronic constipation, and a tendency to the formation of ulcer of the stomach.

Goître is often noticed to develop at puberty, particularly when the menstrual periods have become irregular; and some authors consider that the thyroid gland exercises an important influence over the growth and development of the sexual organs. In many young girls a distinct swelling of the gland may be noticed at each recurrence of the menstrual period.

Enlargement of the tonsils sometimes appears to have a certain influence upon menstruation. The latter may be retarded in patients with marked tonsillar hypertrophy, possibly by the obstructed fauces proving a hindrance to the general development of the body through interfering with respiration and a proper oxygenation of the blood.

Skin affections during puberty are common. An excessive secretion of the sebaceous glands frequently leads to the production of acne, and comedones are often complained of on the nose, forehead and round the mouth and chin. Seborrhœa oleosa is a particularly trying skin affliction which gives a shiny, greasy and somewhat dirty appearance to the face and often completely spoils the young girl's looks. The condition may develop into a form of chronic eczema, or result in the formation of constantly recurring crops of boils and furuncles. Sometimes the vulva is irritated by excessive secretion of the sebaceous glands, especially if the parts are not kept scrupulously clean; and by the accumulation of sebum becoming rancid, small sores and ulcers may form which set up an acute vulvitis of a peculiarly persistent nature.

Another skin disease of the vulva is a form of herpes known as herpes progenitalis, which produces severe itching of the parts, and leads by scratching to swelling and even œdema of the labia.

Urticarial eruptions affecting the body generally may be observed at each menstrual period, or are sometimes noticed when the loss should take place but does not do so.

A form of vicarious menstruation, where hæmorrhage takes place into or even from the skin at missed periods, has been described, but it appears doubtful if such extraordinary

phenomena can be substantiated to the satisfaction of the careful investigator.

Vicarious epistaxis, on the other hand, is certainly possible and is not infrequently noted. The epistaxis may replace the periods in cases of retarded menstruation, or it may appear to assist scanty losses, it or may be noticed as a sort of herald of the onset of each monthly process.

Vicarious menstruation from the mouth and gums, from the stomach and intestines, from the breasts, from the lungs, from the ears, and into the eyes, brain and nerves, have all been described by various authorities, but in most of these cases it is difficult to prove that the hæmorrhage is not due to some local disease or defect which has been aggravated by the general disturbance of circulation known to take place at the time when normal menstruation should occur. Thus vicarious hæmoptysis may be due to incipient pulmonary tuberculosis, hæmatemesis to gastric ulcer, gingival hæmorrhage to spongy gums, otorrhagia to actual ear disease, and so on.

Minor disturbances of sight, of hearing and of smell are not uncommon. Thus conjunctivitis, affections of the eyelids of an inflammatory nature, dimness of vision and passing attacks of blindness, noises in the ears and hallucinations of sound, loss of sense of smell, perverted sense of smell and abnormal acuteness of the olfactory sense have been mentioned by many writers. As a general rule the majority of these cases exhibit some local lesion if a thorough examination is made. Thus, ocular troubles may be traced to local irritation, defects in the lens and hereditary disease. Noises in the ears may be produced by an accumulation of wax or have a nervous origin of a definite nature. The sense of smell may be disturbed by chronic nasal catarrh, affections of the turbinate bones, ozœna and other conditions due to abnormal dryness or the reverse of the nasal mucous membrane.

An almost infinite variety of other morbid conditions might be put down as associated in one way or another with the puberal period of life, but since these belong to the province of general medicine and surgery there is no special need to discuss them here. We shall next consider briefly some of the more important points in connection with the general hygiene,

moral education and minor medical treatment of young girls entering upon the period of womanhood.

To begin with the diet, this should consist of plain ordinary food to the exclusion of much pastry, made-dishes and sweetmeats. Alcohol should be absolutely barred and the mother definitely instructed that such things as port wine and stout are of no value for strengthening the constitution. Plenty of milk and eggs is always beneficial, and in thin anæmic girls cream and butter should be given freely, also plenty of carbohydrates such as oatmeal, rice, potatoes, sago, tapioca, carrots, turnips, sweet fruits, and preserves. Chlorotic girls are benefited by underdone beaf-steak and chops, and by foods rich in albumin, whilst if they exhibit a tendency to obesity, carbohydrates and fats should be limited. Where dyspepsia is marked indigestible articles of food should be rigorously excluded.

As regards exercise, young girls require plenty of it, especially in the open air. Walking, lawn-tennis, cycling, skating, rowing, bathing and swimming are all good, but during menstruation the last two must be prohibited and the others permitted only in moderation. Carefully graduated gymnastics are of great value for developing the muscles and improving the physique generally. Breathing exercises and chamber methods of strengthening the abdominal wall should be regularly practised. Cold-water baths in the early morning, or cold sponging, are good except in weakly girls. The latter may substitute warm-water sponging, or use tepid water in the bath. All classes should wash the entire surface of the body once a day except during the periods, when the washing may be limited to the arms, legs and bust. It should be remembered that not only does hydrotherapy keep the body clean and induce habits of cleanliness, but it also refreshes the system and provides a certain amount of useful muscular exercise.

As a general rule cycling is not to be recommended in neurotic girls in whom the exercise may induce habits of masturbation. If employed, the greatest care should be taken to ensure the provision of a suitable saddle which cannot cause friction upon the external genitals.

Tight clothing of any kind must be sedulously avoided.

Corsets, if worn, should be made of soft pliable material and sufficiently short to produce no impediment to free movement of the trunk and lower extremities. Thin woollen underclothing and stockings are much better than cotton or silk. Garters should not be worn. Shoes and boots should be easy-fitting, with low heels and broad toes. As regards the hair, the recently adopted practice of " bobbing " it has much in its favour. The shorter it is cut, the cleaner it can be kept and the better it is for the preservation of good health. Many young girls suffer from headaches and intellectual apathy through having to support too great a wealth of hair upon their heads. A thorough washing of the hair with hot water and soap once a week should be insisted upon. Where the scalp is too dry or too greasy appropriate applications must be employed: a watch should also be kept for the appearance of any form of alopæcia, whether simple or caused by ringworm or other kind of infection.

Of gastro-intestinal troubles, constipation and dyspepsia require most attention, and it is of the utmost importance that young girls should be instructed to see that the bowels are caused to act at least once a day. Probably one half of all the minor troubles of girls and women are caused by failure to regularly clear the system of the waste products accumulating in their intestinal tracts. Dyspepsia also very frequently leads to ill-health: it may become chronic, producing malnutrition, wasting and general debility, or it may develop into gastric ulcer with all the dangerous consequences of that disease. Both constipation and dyspepsia may be avoided by regularity of habits and a suitable diet, together with a proper amount of outdoor exercise and occasional medicinal treatment. The usual conditions which induce these complaints are lack of personal hygiene, lack of sufficient exercise, sedentary habits, disinclination to go to stool when the natural instinct presents itself, the eating and drinking of unsuitable nourishment, and especially indulgence in such articles as pork, sausages, sardines, pickles, pastry, sweets and tea. Excessive tea-drinking has certainly a good deal to do with the production of stomach troubles of every kind. Many young girls engaged in shop and office work appear to spend a good portion of their

spare time in drinking inordinate quantities of this beverage and in consuming pastries and sweets in place of plain ordinary food. It is little to be wondered at if they develop indigestion in consequence. There is, however, some excuse for them, since business conditions may make it a little difficult for a proper meal to be obtained, but their mothers are to blame for not providing them with a portable meal of suitable nature; whilst often enough in their home life tea-drinking is encouraged to excess and little or no care is taken to give the girls food which can be easily digested and assimilated.

Medicinal treatment for constipation should be of the mild type. Epsom salts in moderate doses, or cascara or phenolphthalein, will serve for most cases. Liquid paraffin often does very well. Rhubarb and aloes are useful at times. Nux vomica and belladonna are sometimes needed to give tone to the bowels. Carminatives and sedatives must be added to strong purgatives should these be required. For dyspepsia, bismuth and soda with a little magnesia and carminatives will meet most cases. It must not be forgotten, however, that medicinal treatment alone will cure but few patients, and that hygiene, regular habits, exercise and proper food are the all-important factors.

Patients suffering from anæmia will require iron and mild laxatives to assist in their restoration to health, whilst rest, change of air and improved conditions of living are also to be attended to.

Chlorotics are often very much benefited by complete rest in bed for a month or six weeks whilst careful medication with iron and tonics is carried out. Afterwards open-air exercise, massage, medical gymnastics and electricity are of great service.

To combat the tendency to increase of the sexual impulses at puberty, attention should be paid to the following points. First of all, the habits of the young girl must be carefully trained in the right direction and her mind occupied with regular study or in suitable business or occupation. She must not be permitted to have too much leisure on her hands, and whatever work she engages in must be efficiently supervised, preferably by one of her own sex. Next, the girl's companions must be

carefully selected and her intercourse with the opposite sex restricted. Theatre-going and visits to the cinema should be limited and supervised. Her reading should be of an intellectual and instructive nature and all equivocal literature kept out of her way. Moreover, the diet must be simple and non-stimulating, hygiene and exercise attended to with great care, warm and easy-fitting clothing provided, and corsets avoided if possible. She should sleep alone and on a well-covered mattress in place of a feather bed, whilst the bed-clothes should not be too heavy or too warm. Instruction in sexual matters should be given by the mother and supplemented by carefully chosen books on the subject, for unless the mother undertakes the task of explaining to her daughter some of the principal natural phenomena of life, including the meaning of menstruation, the nature of conception and pregnancy, the dangers of intimacy with the opposite sex, the evil effects of self-abuse and the necessity for preserving her virginity, she may be quite sure that the girl will find out these various matters for herself and that sometimes the results will be regrettable.

Finally, since the natural temperament of women demands some strong force upon which it can lean and from which it can derive comfort, support and spiritual guidance, no greater mistake can be made than to leave her without the instruction and help of some form of the Christian religion.

CHAPTER IV

LOVE

To treat this subject in a practical way, even when considering it from the medical standpoint, will be generally conceded a difficult task. Yet it was a very early follower of the healing art who diagnosed an apparently inexplicable malady in a woman patient as nothing more serious than an *affaire de cœur*. The reference is to Galen, who by noting the increased frequency of the pulse and respiration in the Roman lady Justa, discovered her love for the dancer Pylades. As a rule love for the opposite sex is not definitely developed until the age of puberty. We are alluding now to that form of love in which the sex element has some influence, and not to purely family affection, which, of course, may exist from babyhood. Early sexual love has often a good deal of the ideal or romantic element in it. It may be apparently without any trace of sensuality in its nature, but this platonic form of affection usually quickly develops into a sex passion and not infrequently becomes a source of social danger. Even the casual observer must have noticed the frequency with which disastrous love affairs, seductions, runaway matches, and even suicide when marriage is impossible, occur amongst quite young girls of an impressionable disposition and deficient will-power.

At puberty nearly all girls undergo marked changes in temperament due to an awakening of the previously dormant sexual impulses. They become outwardly more reserved towards the opposite sex, and search for information on sexual matters from their girl friends and acquaintances. They read love novels with avidity, and may practise auto-eroticism. If they become intimate with a youth who appeals strongly to their sexual inclinations, the risks are undoubtedly great. But intimacy with much older and perhaps married men is a still

more serious danger, the ultimate consequences of which it may be impossible to forecast. The married man may wish to withdraw from the entanglement, but finds that the girl's passion is too strong for him and that he is powerless to stem the torrent which he has set free from its barriers. Both parties are swept off their feet and may sink in the deep waters into which the torrent rushes, or be dashed to pieces on the hard rocks which border its course. In more prosaic language the girl may suffer social disgrace, the man may fall into the clutches of the law and the man's wife and family become impoverished or ruined. Too often, also, a violent death is added to the general disaster or double self-destruction ends the bitter scene.

First love, then, is a love in which the senses play too prominent a part and the sexual passions are too strongly aroused for the dictates of common sense and conventional morality to exercise much sway. Frequently, also, first love is not long-lasting : it may be rapidly destroyed if the idealised person fails in some of the ideals that have been centred in him. The mental equilibrium of some young girls at this critical period is decidedly unstable, and it is well for parents and guardians to remember this, so that if they decide to suddenly terminate an undesirable intimacy, they must not forget that change of scene or occupation, together with the introduction of new companions, are always of great importance in avoiding the possible after-effects of a severe nerve storm. It is never safe to assume that these after-effects will be trifling or negligible. Girls who appear quite unlikely to cause much trouble from an interrupted love affair, now and again break down mentally and become either temporarily or permanently insane. Irremediable immorality and self-destruction are two other possibilities which must not be forgotten and which must be most carefully guarded against, although one admits that in the vast majority of cases with the lapse of time and the introduction of fresh interests the passion of youth is forgotten and no ill effects follow. It is a different matter when the girl is older and has had some experience of love affairs. In a woman of from twenty-five to thirty years of age a serious love entanglement may produce an impression upon

the nervous system which is never entirely recovered from. Actual mental alienation is not so common in full womanhood as during the more unstable period of puberty, nevertheless it does occasionally occur in women with hereditary tendencies in that direction. Thwarted love at the menopause is fully as serious in some of its effects as the love disasters of puberty. Fortunately it is much less common, since the young girl is naturally more attractive to the opposite sex than the woman passing middle age.

At both puberty and the menopause there is a strong tendency to religious love of an exaggerated kind, and the majority of cases of religious mania take place at these periods. It is noted, moreover, that a certain amount of sensuality enters into many so-called " religious revivals," where young and middle-aged women often carry their exaltation to extreme lengths. The frenzy of religion is, in fact, centred in the personality of the preacher in many cases, although sometimes a kind of sexual attraction is actually conceived for the Deity and expressed in the most extraordinary ways. Amongst normal women, love for one of the opposite sex has nearly always a modicum of sensuality in its composition. There are indeed very few who would consent to union with a man who was discovered to be wanting in his sexual organs. If it were explained that coitus could never take place, most women of adult age and some knowledge of the world would refuse marriage, although previously very much in love with the man of their choice. I remember an instance in which I was called upon to explain to a lady at the request of her fiancé that this particular individual was so poorly endowed by Nature in certain qualities that it was impossible for him ever to perform his marital duties in a satisfactory manner. He had himself previously thrown out suggestions in this respect and had received an assurance that no shortcomings on his part could affect her love for him. When, however, the exact deficiency was made known to her, she asked for time to reflect and finally decided to break off her engagement. No pressure was brought to bear by relatives or friends, and the obvious conclusion was that she herself felt that a purely non-sensual love would be unsatisfying and impracticable.

Sensual love is indeed the hidden force in almost every love affair worthy of the name. It. is true that sometimes the sensual passion may be only present to any appreciable extent in one of the lovers, but that one—usually the man—also believes that the other is capable of returning or satisfying these carnal desires. Since sexual impotence is practically non-existent in women, for the very obvious reason that she is not called upon to perform more than a passive part in coitus, it follows that total absence of sexual passion in the female does not play so important a part in the destruction of love, as it does where the male is the party at fault, and when naturally the defect cannot be finally concealed. At the same time a marriage contracted without some amount of sexual love in both of the contracting parties is rarely satisfactory for very long—unless both are equally lacking in sexual desire. In the latter event, provided that man and wife are suited to each other in temperament and inclination, the union may be devoid of unpleasant consequences. But such conditions are rare, and even when stated to exist are not always devoid of suspicion. It must not be forgotten that a supposed passionless woman may not be actually passionless. She may simply be one whose sexual instincts have never been aroused. Provided, then, that these instincts remain dormant she may live on good terms with an impotent husband. But if another man capable of stimulating her slumbering desires should appear upon the scene the happiness of the unnatural marital life may be rudely disturbed.

From time to time purely spiritual relationships between man and woman have been recorded, and in the Middle Ages it was customary for a gallant knight to place his ideal woman upon a sort of fairy pedestal and to endure almost incredible hardships and trials, for the favour of a mere acknowledgment of his services in her cause. He was content to act as her slave and to shed his blood to the last drop in upholding her reputation for beauty and chastity. In those days the spirit of romance and knightly gallantry was thought much of, and made the subject of love poems and the compositions of troubadours and minnesingers. In later periods of history this abasement of man to woman—really a form of masochism—began

to die out and was replaced by a species of false gallantry which achieved its height at the courts of the fourteenth and fifteenth Louis of France. Flirtation and coquetry then became the stock-in-trade of the fashionable gallants and fair ladies who subordinated love to conventional propriety, whilst actually leading the most sensual of lives and passing their time in idleness and luxury.

In modern days it has become somewhat the fashion to assert the equality of the sexes, and for women to regard themselves as the competitors of men in almost every field of enterprise and intellectual pursuits. As a natural consequence sexual love and passion have been theoretically relegated to a back place by the " advanced " woman of the present age.

As a strict matter of fact fashions of love-making and views on the equality or non-equality of the sexes have never affected the love passion. Throughout the ages desire has remained unchanged, just as hunger and thirst have remained unchanged. As long as man retains the human form the natural impulses of nature will assert themselves. And amongst these natural impulses sex-love will always seek and demand its own. Custom and fashion may alter procedure, but they cannot change the inborn instincts. The primitive savage man satisfied his sexual desires without troubling about formalities; the medieval knight and the court gallant of the Middle Ages may have regarded outward form as essential rites in their dealings with ladies of their own station in life, but they usually solaced themselves freely enough with women of a lower class; and very much the same sort of thing occurs with our modern men of fashion and even with our so-called " intellectuals." Platonic love, or the æsthetic contemplation of the beloved person apart from any sexual passion or desire, is a doubtful entity as far as the normal individual is concerned. The romantic dreamer, the artist, the poet and the imaginative *littérateur* may all for a time form such platonic friendships for one of the opposite sex, but it is probably untrue that any of them could be permanently satisfied with a purely spiritual and emotional love life. In the end the sensual demands of the individual will have to be dealt with, and either marriage, free-love, or prostitution, will be resorted to. It must not be

thought, however, that all human nature is essentially sensual and to the exclusion of all that is æsthetic. On the contrary, with the awakening of the sexual instincts there is also a stimulation of the æsthetic tendencies of man. It is well known that a youth and a maiden in love begin suddenly to develop the desire for poetry, for art, for music, or for literature of the elevating kind. They see for the first time the beauties of Nature, they revel in the joys of the country, they listen to the songs of the birds, they delight in the pleasures of self-sacrifice and generosity. But love without any admixture of sensuality probably leads to nothing more than romantic day-dreaming and provides no stimulus towards a higher development of the intellectual and artistic faculties.

Then, again, we know from experience how the spirit of self-sacrifice and altruism enters into the lives of the lovers: how the man will work and toil incessantly to gain fame or improve his position in life: how he will overcome bad habits and how he will devote his every thought to make himself worthy of the woman he loves. But it is extremely doubtful if all these things would happen if the sensual element in love were absent. We have just referred to the man's emotions and feelings; very much the same applies to the woman. Moreover, in literature one does not read many love stories woven around unsexed individuals of either the male or female kind, and if the rather uncertain instance of Héloïse and Abélard be excepted, I doubt if anything of the sort is received with favour. Also be it noted that in the case of Abélard the loss of sex took place after the love passion had been in existence for some time.

A rather disturbing factor in some cases is that a woman may love more than one man at the same time. She may be sexually attracted by one man and intellectually or spiritually by another. She may actually give herself to both, and even live with each in turn, but instances of such cases are rare because few men will consent to proceedings of this kind unless the woman is a prostitute, and it is not that class that we are considering at the moment, but rather the woman of intellect and high ideals, who has also strong sexual passions over which she has not complete control. A woman with a sort of dual

personality of this kind strives to find a man who will satisfy both her spiritual and sensual desires, and if unable to do so may find herself compelled to divide her favours between two or more of the opposite sex. The result is almost invariably disastrous and very frequently tragic.

Double love in men is much more common, and since it can be more easily concealed does not perhaps so frequently lead to such dangerous terminations as in women. Still it is sufficiently risky to cause most men considerable anxiety and trouble, and if the man be married and the *liaison* is discovered, his position is not one to be envied. Whilst admitting that double love is indefensible as far as married persons are concerned, and that it is undesirable even when none of the parties are married, it has also unfortunately to be recognised that perfect and lasting love between a man and a woman is uncommon. Single love is ideal, but how seldom are two human beings perfectly united. Complete harmony between one man and one woman is difficult to obtain. A woman may love her husband for his strength and physical perfection and yet find him altogether lacking in certain mental and spiritual qualities that would make him a real soul-mate to her nature. Conversely a man may love his wife, for her purity and chastity and yet find her insufficient to satisfy his sexual demands. Or she may be frankly sensual and adorable in a physical sense, but intellectually so incapable of understanding her husband's ideals that she causes him constant irritation and annoyance. It is therefore possible to understand that under certain conditions either a man or a woman may simultaneously be in love with several individuals. Moreover, besides understanding the possibility, we must bear in mind that such conditions *do* exist and that they merit due consideration. On the whole it may be confidently stated that a woman's love is more complete and more lasting than that of a man once it has been freely given and reciprocated. At the same time it cannot be denied that a man's love for woman is generally the more passionate. Mutual perfect love, when it exists, is something which borders upon the sublime.

The power of woman's love—and we include both spiritual and sexual in the term—is undoubtedly very great and its

influence far-reaching. As Theodore Mundt says, "The most secret elements of woman's nature, in association with the magic mystery of her organisations, indicate the existence in her of peculiar and deep-lying creative ideas, and in this wonderful riddle of love we find the sympathetic of the entire universe expressed. The sympathetic which attracts and binds forces, the silent music in the innermost being of the world's soul by means of which the stars, the suns, bodies, spirits are compelled to move in this eternal changeable rhythm and in this continuous opposition, is the feminine of the universe. This is the eternal feminine of which Goethe says that it draws us heavenward. Therefore there is nothing deeper, more gentle, more unsearchable, than a woman's heart. All-movable, it extends into that wonderful distance of existence and hears with fine nerves the most hidden elements of it. Touched and shaken by every sound, like a spiritual harp, the secret aspects of nature and of life often evoke in its strings prophetic oscillations. The feminine is something common to all life, the most gentle pysche of existence."

It cannot be doubted that love is necessary for the spiritual advancement of the individual, for the promotion of civilisation, and for the higher evolution of humanity. As already indicated, an individual may regard work, effort, creation, and the struggle for fame, position, and honour as all subordinate to the attainment of one aim—love. And it is highly probable that this is right. At the same time one cannot agree with certain writers who see the influence of sex and sexual passion in practically every action and thought of everyday life and who ascribe to sexual abnormality every psychic defect in man or woman. These sexual philosophers appear to overstep the bounds of common sense and reason, and by so doing render themselves a little ridiculous. The influence of love and the sex passion, however great, does not extend to every minor detail of existence, and men and women do many things and suffer many things which have no connection with sex instincts.

CHAPTER V

INCREASED SEXUALITY—SEXUAL EXCESS AND NYMPHOMANIA

THE average healthy and unattached adult woman who is a virgin and has not been addicted to perverse habits can scarcely be said to suffer much from definite sexual desires. That is to say, she does not usually experience an uncontrollable desire for coitus. She may have a strong inclination for the company of the opposite sex, she may derive pleasure and excitement from flirtations and close intercourse with men, and she may have vague sexual feelings aroused by the attentions of a particular individual, but she does not as a rule feel the intense desire for gratification of the sexual passion by copulation, as in the case of the male. Should she, however, have permitted a lover to take liberties with her and to induce vulval stimulation, the sexual passion may become definitely localised and assume a definite shape. In most cases, as is well known, the first actual coitus is a somewhat painful experience to the girl, who derives little or no pleasure from it and may, perhaps, experience regret, and alarm for the consequences. The act if frequently repeated, however, does become intensely pleasurable, and satisfying to the passions which she now begins to experience for the first time. These passions though sexual in origin are also usually accompanied by a deep love for her partner, and so intimately are the sexual and spiritual feelings combined that, should the man fail to return her love, she will quickly tire of the mere sexual gratification and even refuse it altogether. This holds good in the vast majority of cases, but exceptionally a girl whose powerful sexual inclinations have been once thoroughly roused may find herself impelled to give way to them without any question of love between herself and her partner or partners. Indeed she may find one man insufficient to supply her needs

and give herself freely to all who solicit her favours. In such women sexual desire has become so powerful that all moral control is lost and everything is subordinated to bodily lust. Sometimes the condition may be remedied by marriage, but more often it ends in prostitution and disgrace. It is not in the province of the medical man to judge these unfortunates, nor must it be forgotten that there are many men similarly afflicted who by reason of the greater freedom of their sex escape condemnation in the eyes of society.

Whilst admitting, however, that in most cases girls are originally initiated into sexual matters and led astray by men, there are undoubtedly instances where the reverse condition of things takes place. Thus, time after time one hears of girls and women, said to be virgins, making immoral overtures to men, exposing themselves in the most provoking ways, visiting them in their bedrooms and so on. This has been proved to occur in the highest as well as the lowest classes of society, and can only be explained on the grounds of uncontrollable sexual desires. No doubt many of these girls have been artificially stimulated by erotic literature and doubtful companionship, but there still remains a certain number in whom Nature has implanted such strong sexual tendencies that satisfaction of them becomes an imperative necessity. Close contact with men naturally adds fuel to the flame, and the experiences of most social workers in mills, factories, workshops and large institutions of various kinds verify this up to the hilt.

Whenever the nervous system is unduly excited, as in times of war, religious revivals, intensive pleasure-making and so on, there is a marked tendency for girls and women to lose control of their natural restraint and to allow themselves to indulge in sexual intercourse, not so much because they desire actual coitus as because they have an indefinite longing to partake of pleasure and excitement in the company of one of the opposite sex. In those cases where coitus is definitely sought it will generally be found that the woman has either had previous experience of it, or has practised auto-eroticism, or has had her ideas in this direction excessively stimulated by erotic literature, suggestive pictures, or the influence of sensual acquaintances.

Violent sexual desires are sometimes aroused by the sight of

the male organ and by chance views of the sexes in equivocal positions. As a general rule, however, it is in the case of married women that increased sexual desire becomes most developed and most troublesome. One does not mean by this that the condition is very common—probably more husbands are lascivious than wives—but when it does occur it is difficult to deal with. Thus, a very passionate woman may demand more frequent intercourse than her husband can grant, and should he unfortunately be below the average in sexual powers it is easy to understand that the wife may suffer acutely in consequence. She becomes irritable and neurotic, may develop perverted habits, take to drugs, or become unfaithful. The prospect is not a pleasant one to contemplate, and yet it occurs sufficiently frequently to require serious consideration. Its unpleasantness is still further aggravated by the fact that the trouble, although easy to diagnose when a correct history is obtainable, is almost impossible to cure legitimately. The physician is faced with both a demand and a refusal of Nature, and the limited powers at his disposal can do but little to modify the one or to stimulate the other. Occasionally, it is true that he may improve the general health and strength of the husband and so increase his sexual powers, whilst by judicious advice and sedative medication he may diminish the desires of the wife, but in the majority of instances he can make little or no headway against the conflicting forces, and has to give up the unequal contest. In other words the ill-matched pair have to work out their own salvation. (When the reverse condition of things prevails, and the husband requires excessive coitus to satisfy his natural instincts the results are not usually so serious since the wife need not play more than a passive part in the act of congress, and there is no reason why her health should suffer very much if the husband's excesses are not altogether unreasonable. As a matter of actual fact the complaints under this heading are not very numerous as far as normal and healthy women are concerned. Should the physician be consulted, however, he can often prove of some assistance. With the exercise of sufficient tact and after making a careful physical examination of the husband, he can point out that the excessive coitus may

eventually undermine the man's own constitution and thus lead to serious disease. Very few men will not be immediately influenced by such observations made by a doctor in whom they have confidence and whom they may consider to be unbiassed. The difficulty is that the doctor is not always consulted; also that he does not usually have the opportunity of interviewing both parties and so hearing both sides of the question. Very often the wife comes to invoke his assistance, but cannot persuade her husband to come also. In such cases the practitioner may find it useful to call in a consultant, thus making the matter more impressive and at the same time practically compelling the attendance of the husband.)

We have hitherto only considered cases where an increase of sexual desire occurs in more or less normal females, but we have still to consider a condition known as nymphomania, where the patient is probably not merely extremely passionate but also either mentally deficient or abnormally constituted. Such individuals appear to have inordinate sexual desires from a very early age. When eight or nine they seek the company of young boys and endeavour to have coitus with them, or they may solicit older youths to satisfy their wants. If coitus be impossible they induce their boy playmates to stimulate their external genitals by friction or otherwise. They appear devoid of all moral sense and yet have a knowledge of sexual matters far in advance of their years. Sometimes the onset of puberty and menstruation may for a time check their abnormal tendencies, and in a certain number of cases they become naturally cured. Very often, however, the condition proves to be permanent and incurable and may result in the woman being forcibly placed under restraint.

Whilst actual nymphomania in the form of true mental disease or abnormality is very rare, a condition bordering upon this is not so uncommon, and cases are from time to time recorded where girls develop an uncontrollable degree of sexual passion which becomes incompatible with respectability and is the despair of their parents. The young woman speedily collects around her all kinds of undesirable acquaintances and may distribute her favours widely. Frequently she becomes

pregnant, and the paternity of her offspring is then a matter of complete uncertainty. In this eventuality criminal abortion is often resorted to, usually with disastrous consequences. Should an early marriage be arranged, there may be some hope of stemming the tide of trouble, but if the husband should prove unable to cope with his wife's demands, the risks of illicit intercourse with other men may have to be faced. Where the husband conceives a dislike for his wife's passionate advances, the danger is intensified, and if the dislike for each other becomes mutual the situation generally ends in the divorce courts. The disagreeable publicity of such proceedings may inhibit the sexual propensities of the wife for a short period, but afterwards she will again resume her relationship with other men, and should she be unsuccessful in remarrying the chances are that she will lead a life of flagrant immorality. As a prostitute she is not usually a success, because she enters into the business with too much ardour and too little regard for the results, so that she either becomes pregnant or contracts venereal disease, or leads such a dissipated and reckless existence that she becomes unattractive except to the very lowest class of men, and in consequence is reduced to the utmost depths of poverty and distress.

A typical example of nymphomania is related by Trelat. A certain Madame V. had from her earliest years formed associations with all kinds of boys and men and given herself freely to them. In company she appeared a model of decorum and modesty, but the moment she was left alone with one of the opposite sex she endeavoured to have coitus with him. After a number of scandals, a marriage was arranged and she became the mother of several children. But although she loved her husband and her family, she still continued to have sexual intercourse with almost every man with whom she came into contact. With a large number she was successful, and scarcely a week elapsed without her obtaining a new lover. If the supply of men ran short, she made shift with youths or with quite young boys. Even when she grew old and became a grandmother her sexual passion did not abate but rather seemed to increase, so that her scandalised family caused her to be shut up in a convent. There she conducted

herself with so much propriety and displayed so much zeal in her religious exercises that representations were made that she ought to be permitted to return to her home. She was liberated and immediately resumed her licentious habits, offering herself to every male person she became acquainted with. As many now repulsed her advances owing to her age and venerable appearance, she began to pay men for the shameful service which she demanded. Not being allowed any money from her family she worked industriously to obtain the wherewithal to induce her lovers to satisfy her. She dressed herself neatly, was very clean in her habits, did not indulge in alcohol and appeared externally to be a simple and honorable old lady of a diligent and pious disposition. Yet even at the age of seventy she had a large number of paid lovers who served her almost daily with their shameless favours. She died at seventy-four from cerebral hæmorrhage and was hopelessly immoral to the end. In all other respects than the sexual one she appeared to be perfectly normal and her physical condition and general health were perfect.

Similar cases are related by other authors and history gives us numerous typical examples. Thus the Empress Messalina is well known to have visited houses of prostitution and given herself freely to all comers in order to satisfy her unconquerable sexual desires. Cleopatra is reported to have had coitus with more than a hundred men in a brothel without becoming tired of the enjoyment. The daughter of Cheops is said on good authority to have had innumerable lovers; and the sexual excesses of some of the most famous women of those days were almost incredible. A strange feature of many cases of pronounced nymphomania is that the external and internal generative organs appear quite normal and that the woman does not seem to suffer physically from the excesses which she commits. The mental condition of women with uncontrollable sexual desires, however, is usually abnormal. Something akin to hysteria is generally present and a neurotic family history can frequently be obtained, whilst an inherited tendency to crime and prostitution is not uncommon. Hysterical women are well known to have increased sexual desires, and many instances are related of their visiting doctors for the

express purpose of being vaginally examined so that they may experience lascivious sensations.

It is perhaps unnecessary to warn medical men against women of this class, but the unsuspecting physician is sometimes taken unawares, and it is unwise for him to make any such examination in the absence of a reliable third party, unless he is well acquainted with the person who consults him. Cases of alleged criminal assaults frequently come before the law-courts, and the accused doctor may have the greatest difficulty in clearing himself, for the hysterical woman is a fluent liar and will relate the most circumstantial evidence against the man who has not yielded to her desires.

A condition of semi-nymphomania is not infrequently associated with both masturbation and unnatural sexual practices. In some women the sexual excitement is not continuously present, but only comes on at intervals. In others there appears to be no intermission of the malady and coitus is even sought during the menstrual periods. Where no other outlet is possible, incest may be committed with male members of the family. In the upper classes artificial priapi may be employed, and the manufacture of such articles, often most elaborately constructed, affords evidence that these practices are not unknown at the present time.

The treatment of uncontrollable sexual desire and nymphomania is difficult and often completely unsatisfactory, since the causation is usually mental and not physical. When induced by habits of masturbation every effort must be made to put a stop to these, but patients require constant watching and impressive moral instruction, frequently repeated, to produce any appreciable effect. A course of bromides and valerian may do some good, and as much mental and physical exercise as possible is always advisable in order to distract the mind from sexual matters. In single women a suitable marriage may suffice to cure mild cases. With nymphomania in the married it may be necessary to advise temporary seclusion in a suitable institution. Where medicinal treatment and seclusion have failed to produce good results, and if the patient herself desires it, operative interference may be considered. A good deal has been said against the last-named

proceeding, and it certainly requires much thought and the backing of two or three unbiassed opinions in its favour before it is resorted to.

Of the various operative proceedings which have been tried, it may be said at once that clitoridectomy, formerly much in vogue, has been proved to be entirely useless and should never be sanctioned. Removal of the ovaries sometimes does good but is quite uncertain in its results. Combined removal of the ovaries, tubes and uterus appears to act the most beneficially, but even here success does not always crown the surgeon's efforts, particularly in those cases where the mental condition is unstable or abnormal. It must be remembered, moreover, that a good deal of sexual sensibility is connected with the vagina itself, and that since it is practically impossible to entirely obliterate this canal by operation, the afflicted person may still retain a certain amount of sexual desire even if all the internal sex organs are removed. It is further probable that in purely mental cases operative proceedings would not appreciably minimise sexual inclinations and might even produce complete insanity. Doubtful and borderland cases are therefore also, perhaps, best treated by sedatives and supervision, but it is impossible to lay down any hard-and-fast rule, and of late psychotherapy and treatment by suggestion has had so much success in mild cases that it may be worth a trial in severe ones also. At all events it is best to judge and treat each case on its merits and not to be very dogmatic about results.

Further, the practitioner can never be too careful in making an apparently obvious diagnosis. The case is related of a certain woman coming to consult a medical man for advice on the problem of how to check her tormenting desires. She informed him that she felt an irresistible impulse in a certain direction every time she found herself alone with a good-looking man. The doctor diagnosed the case as one of nymphomania and prescribed bromides and valerian. A few days later he received a letter from the woman threatening him with legal proceedings for an alleged criminal assault upon her. The woman was not a nymphomaniac but an astute blackmailer. Very fortunately the doctor's consulting-room had a mere

matchwood partition between it and his dispensary, and it so happened that his dispenser had practically heard all that went on between doctor and patient. The practitioner rather unwisely stated this fact in his reply to the letter and nothing further was ever seen or heard of the criminal, who, by the way, was discovered to have actually obtained money by the same method from other practitioners less fortunately protected. It should be remembered, however, that true nymphomaniacs may visit medical men for the express purpose of obtaining sexual intercourse with them, and when this is refused, actually bringing a charge of attempted assault against the doctor. Hysterical spite, and not the extortion of money, is here the motive for the infamous act.

CHAPTER VI

SEXUAL FRIGIDITY

A CERTAIN number of women appear to pass through life without ever developing any marked sexual instincts. Puberty starts at about the usual time and is accompanied by the usual changes. The girl develops into a young woman, her sexual organs are normal, her general health is good, her mentality is that of other young women in her station of life. She attracts and is attracted by the opposite sex. Possibly she makes a love match and marries a man whom she sincerely likes. It is then that domestic troubles arise. She has no desire at all for sexual intercourse and will endeavour by every means in her power to put her husband off or induce him to limit his attentions as far as possible to something short of actual coitus. The results of such a marriage are usually disastrous. Children may be born and both husband and wife may be devotedly attached to each other, but the husband usually goes astray and satisfies his sexual desires elsewhere, unless he should also happen to have a somewhat cold temperament, or be in poor general health, or adopt habits of self-abuse. As a matter of fact in most cases the husband becomes a defaulter with other women. He may have no real affection for anyone but his own wife, yet he finds the calls of nature too strong to be resisted. In not a few instances he pays the penalty for his amorous adventures either by contracting venereal disease and ruining his health, or by becoming so hopelessly entangled or financially embarrassed that concealment is no longer possible. The mental effects have also to be considered, and many a man has committed rash acts under the strain of leading a double life which have led to most serious consequences. For much of all this the wife is directly responsible, and yet she, poor woman, cannot alter her nature any more than her husband can alter his.

The whole affair is an unfortunate one; both parties have been the playthings of Fate, and when one has said that, one has said all. Mr. Hubert Wales's well-known novel, entitled *Mr. and Mrs. Villiers*, illustrates such a case admirably, and instances drawn from one's own experience might be quoted by the dozen. I will content myself by giving a couple of typical examples.

A well-known and prosperous business man consulted me with regard to his condition. He had been married for four years and had only twice been able to have connection with his wife during that time. She was very fond of him and had helped him considerably in his business; as a matter of fact she had been the means of building up his fortune and career. She made it so plain, however, that she experienced no pleasure in sexual intercourse, that he had entirely refrained from coitus after the two occurrences already mentioned (which took place during the honeymoon). Neither of them had any other attachment, but the man complained that the unnatural married life had adversely affected his health. He had at first suffered considerably from nocturnal emissions, but after a time these ceased, and he became markedly neurotic. Lately he found that his temperament was changing and he was becoming irritable and impatient at trifles. It was difficult to offer much advice and I prescribed sexual sedatives. A year later he left home and lived for some time with another woman. He made his wife an ample allowance and neither party seemed to desire a divorce.

In the second case the woman was the wife of a country cleric. She had had one child and also a miscarriage during ten years of married life, but her husband found her so cold sexually that after much consideration he had decided not to seek further pleasures from her, and by dint of low living and high thinking succeeded in subduing his own sexual desires entirely. He adopted various eccentric diets and systems of physical culture, and died rather suddenly from pneumonia contracted whilst living in a tent during a holiday.

Various attempts have been made to stimulate the sexual senses of women who exhibit these "cold" temperaments, but as a rule unsuccessfully. The sexual organs are usually

normal, there is no constitutional defect, and as far as can be discovered there is nothing wrong with the endocrinous glands —at least treatment in the last-mentioned direction has no effect. In a few cases another man than the husband appears to be able to stir up some dormant sexuality, and one has seen some rather remarkable incidents of this nature. I recollect the case of a woman who had lived for four or five years with her husband—a strong, healthy and virile man, to whom she was much attached—without intercourse taking place more than two or three times. She then became enamoured of a young musician with whom she had become acquainted quite casually. She left her husband and went to live with this young man and indulged in almost daily sexual intercourse with him. Her husband divorced her, and after a time her paramour left her and she fell on evil times, until one day her former husband, taking pity upon her, invited her to live with him again. The result was sexually satisfactory for one night only, after which her former frigidity returned. The husband kept her, however, although remarriage did not take place.

Some sexually frigid women, wiser than the others, succeed in concealing their lack of enjoyment of the sexual act by a system of well-acted pretence. More than one happily married woman has confessed that coitus meant to her nothing beyond a sort of irritating friction which if too long in duration became acutely painful. One has noted, however, that in a fairly high percentage of cases women who are sexually frigid with their husbands appear to have a craving for the society of men generally. It is difficult to deduce the exact meaning of this, but to my mind it appears an indication that the sex instinct is not entirely wanting. Others argue that this desire for male society is simply evidence of an unsexed condition, and is indulged in as a means of providing distraction and amusement of an intellectual order. It is quite true that some of these women are highly intellectual, and it is also true that "intensive" education tends to blunt the sexual passions, but it is incorrect to assume that even a majority of highly educated women are sexually cold. It is, however, an admitted fact that any occupation or pursuit which will mentally or

physically tire the system will naturally tend to diminish sexual desire. Thus, a girl whose entire mind is absorbed in an attempt to pass a certain examination, and who has no love affair to distract her thoughts, becomes more or less sexually cold for the time being. If, after the examination is over, further intellectual studies follow, the coldness may continue until it becomes second nature. Similarly, girls who train for athletic championships of various kinds, or who take on very laborious work requiring a good deal of concentration, may gradually have their sexual feelings blunted.

Still, most of these cases are temporary and capable of speedy alteration under favourable conditions. The true form of sexual frigidity very seldom, if ever, improves, and is as difficult of explanation as why some persons tend to become tall and stout, whilst others remain short and thin under apparently exactly similar conditions. Mother-love has nothing to do with sexual frigidity, and the woman with no inclination whatever for sexual intercourse may be devotedly attached to her child if she has one.

It is advisable to warn the practitioner once more against too readily forming a diagnosis of "coldness" in women. Often the condition is but a relative one. Thus, for example, a husband complains that his wife has no sexual inclinations and is distressed thereby. But it may be that he has not the ability to arouse her feelings. He may experience the sexual orgasm so quickly that his wife has not the time to derive any satisfaction from coitus, and therefore the act appears to her as something merely disagreeable. Or the wife may have no sexual liking for her husband. Or there may be some physical defect in the husband which is offensive to the wife and prevents any sexual passion being aroused. Thus, in one case a man's breath was so extremely fœtid that the wife could not bear his embraces; yet she was too shy to inform her husband of the real nature of her supposed "coldness." Similar repugnance was produced in another woman by the sight of certain war-scars on her husband's body. "Marriages of convenience" are notoriously apt to be accompanied by sexual frigidity, since the inclinations of the bride may be directed into other channels than the legal one.

It will easily be understood that there are hundreds of conditions similar to those just mentioned where it may be exceedingly difficult to get at the real nature of the trouble, and where a diagnosis of "sexual frigidity" may be utterly incorrect. Time does not always cure or even modify these pseudo-frigid cases. Too often the woman's repugnance increases, and she or the husband (or both) seek consolation outside the home. In true sexual frigidity the woman as a rule is not unfaithful to her husband; she may like the society of men who may also be sexually attracted by her, but there is no inducement for her to break her marriage vows, since sexual congress is not a pleasurable act.

In a small number of cases frigidity may be due to long-continued masturbation, which after marriage is found more pleasurable than coitus, possibly because the first attempts at intercourse proved somewhat painful.

Nervous impotence on the part of the husband may sometimes induce a pseudo-frigidity in the wife. As he appears incapable of a proper erection, the woman gradually tires of the futile attempts at coitus and refuses to take any further part in the business. In such cases, however, the accusation of frigidity is seldom made, since the husband is naturally ashamed to disclose his own weakness—and yet he may be capable of having perfect intercourse with other women.

Again, the wife may have some real or fancied grudge or grievance against her husband, the nature of which she sedulously keeps to herself. She may continue to live with him, but will not consent to intimate relations. If the husband does not suspect the true condition of affairs he will naturally conclude that his wife's nature is too cold for him to obtain her favours and may give up attempts at intercourse.

A type of relative frigidity is also met with amongst young society women whose love for their husbands is quite a secondary matter compared with their inordinate love for gaiety and amusement. They consider it absolutely imperative to carry on their daily round of society engagements, and fatigue themselves so thoroughly in the process that they have little energy left for marital relations. Added to this, their fear of becoming pregnant, and so being obliged to remain at home,

makes them still more inclined to suppress any sexual desires that they may have, or they impose such restrictions upon intercourse that the husband prefers to take his pleasures elsewhere.

There is also to be considered the woman who has an inordinate fear of pregnancy and labour, quite apart from any thought of their interference with the amusements of life. She has probably heard of bad cases of confinements, and has allowed her mind to dwell upon these to such an extent that she is unable to view the matter in its proper light. She is convinced that to have a child would either kill her outright or cause her such an amount of suffering that she would be unable to bear it. She pictures in her distorted imagination scenes of horror that would need the pen of an Edgar Allan Poe to describe, and stifles all sexual desires on the part of her husband by hysterical outbursts of appeals for mercy and forbearance. Argument on his side of the question usually ends by her denouncing him as an individual without soul or pity, and he has, perforce, to give up the idea. Such women are often in very good general health and physically quite able to bear children, the whole trouble being a purely mental one. In a majority of these cases the physician who can explain matters on common-sense lines will effect a cure. The impression which he makes, however, will be increased if he convinces all parties by means of a most careful physical examination that he is making a correct assertion. If the patient does become pregnant it may be advisable to render labour as painless as possible by the use of scopolamine-morphine or chloroform. An easy first confinement will permanently cure the patient's fears for the future.

A certain modern novelist, who shall be nameless, has done a good deal of harm by laying stress upon the alleged destruction of woman's figure by childbearing, and it is a fact that a certain number of weak-minded females have seized upon this assertion to discourage sexual intercourse, informing their husbands that it would be unfair to them to have their beauty and grace of form spoiled in early life by becoming pregnant. Here, again, a little plain speaking by the family medical attendant may do a world of good.

Unfortunately in some instances the wife gives no explanation for her disinclination to submit to sexual congress, and the husband, not understanding her point of view, puts the trouble down to coldness of nature or "sexual frigidity." As a result the couple drift apart and the home life is ruined

From a consideration of these various possibilities the careful physician will see the importance of being on his guard when consulted about any individual case. A woman is not to be immediately considered as sexually frigid on a mere statement of unexplained facts. Every case must be personally investigated and every avenue of research explored before a conclusion is arrived at. One must also remember that it is frequently impossible to arrive at the truth unless the utmost delicacy and tact is observed, and that even then it may be a matter of intuition or accident for the problem to be solved.

To sum up—sexual frigidity may be either absolute or relative. Absolute cases depend upon some inherent fault in the development or innervation of the individual. The woman is sexually cold towards the opposite sex, and if mated to any other member of it than her husband would exhibit no alteration of her nature. The condition is incurable and no treatment can be suggested. Relative frigidity may be (1) caused by the husband and due to a definite reason, which, however, may be concealed; (2) due to a dislike or fear of the consequences of intercourse; (3) caused by preference for certain bad habits, such as self-abuse; (4) the result of mental or physical fatigue. Relative frigidity is also classed as temporary, since the condition is usually capable of improvement, if not of absolute cure, in the course of time.

CHAPTER VII

SEXUAL AVERSION

SEXUAL aversion is included by some authorities under the heading of Sexual Frigidity, and the two conditions have certainly a good deal in common, yet the woman who is cold in nature is not necessarily one who has an active dislike to the act of coitus: she is simply indifferent to its pleasures, or refuses it for reasons which have already been discussed. Sexual aversion, like sexual frigidity, may be either absolute or relative.

In absolute sexual aversion the woman loathes, or actively dislikes, sexual congress in any form. She regards it as unpleasant, painful, degrading, bestial, revolting, or of the nature of a crime towards herself, and cannot voluntarily be made to submit to it. Absolute sexual aversion is a condition produced by some abnormal mental state, and has nothing to do with any physical defect or abnormality in either the woman or her partner. Coitus, if ever performed, is not painful and husband and wife may be devotedly attached to each other. The condition is not common, but such cases do occur and almost every medical man with a large female *clientèle* will be able to recall instances which have occurred in his practice.

A more common type of the affection is that where the condition is relative and produced by some physical cause. If there is a marked disproportion between the male and female organs, or if first attempts at intercourse have caused severe pain or injury, it is easy to understand how the woman may come to dread a repetition of the act, especially if she herself is not of a passionate nature.

Painful intercourse may be due to a variety of causes, such as: (1) Violent tearing of the hymen followed by the production of very tender carunculæ myrtiformes. (2) Actual lacerations of the vulva and vagina which are not allowed to heal

completely before renewal of intercourse. (3) Urethral caruncles. (4) Painful spasms set up by attempts at coitus—vaginismus. (5) An irritable and inflamed vagina due to some local affection or disease. (6) A naturally small vagina which is deficient in its powers of dilating.

Relative repugnance to intercourse may be due to the fact that the wife dislikes or detests her husband for some special reason, or fears he is suffering from venereal disease and will infect her, or suspects that there is hereditary disease in his family (or in her own) which would contaminate any offspring. A sudden access of what might be termed " religious melancholia " has been known to produce a temporary abhorrence of carnal relationship in women of rather unstable mental equilibrium. And where the husband has given way to drink, or developed vicious habits, temporary dislike for intercourse is a very natural consequence.

In all these cases it will be easily understood that the aversion to intercourse is but a relative condition, and that if the exciting cause can be removed the trouble may be cured. One uses the word " may " advisedly, because if the cause has been in existence for too long a period it may be impossible to remove the profound mental impression which it sometimes produces. In that case the woman becomes permanently frigid towards the man who has distressed her. There is thus considerable relationship between relative aversion and relative frigidity.

Absolute sexual aversion is practically an incurable affection: the relative or temporary form is treated on ordinary surgical lines. Thus tears and lacerations of the vulva and vagina must receive proper attention and rest; painful carunculæ may be excised; urethral caruncles should be removed by excision or cautery; any local irritation of the vagina must be soothed by suitable sedatives and attention to any discharge; a small vagina may be dilated under an anæsthetic; vaginismus is often relieved by stretching the vagina and the use of cocaine pessaries; a rigid hymen should be incised; a sensitive hymen may be excised; kraurosis should be treated by anæsthetic local applications or the diseased parts dissected out; venereal disease will receive the

treatment suitable to the infection; stenosis of the vagina will require operation to effect a cure, and the same procedure applies to prolapse of the uterus, cystocele, rectocele, vaginal neoplasms, ruptured perineum, and so on.

It must not be forgotten that in many of these temporary or relative conditions there may be some degree of aversion to sexual intercourse on the part of the husband also. Further, if the husband be a man of little tact, or coarse in nature, he may allude to his wife's defects in terms which make the unfortunate woman so unhappy that she develops a profound dislike, or even hatred, of her partner. The temporary condition may thus eventually become a permanent one, and the cure of local troubles will not then lead to the cure of the aversion. I have met with numerous instances of this and will quote two as typical examples.

Mrs. B., the wife of a mechanic, suffered from a urethral caruncle which was so acutely painful that intercourse was rendered impossible. As micturition was also painful she developed the habit of holding her urine for long periods of time. As a result of this a mild cystitis was produced and the urine became somewhat offensive. Her husband complained of the odour of urine which he said always hung about her and refused to occupy the same bed. He also spoke of this to some of her relations, and greatly incensed his wife thereby. She consulted a specialist and was operated upon. The caruncle was removed and irrigation of the bladder performed for a few weeks. The whole trouble was completely cured, but the woman never forgot the indignities to which she had been subjected and would not consent to a resumption of marital relations with her husband, declaring that she hated the idea of an act which she now considered to be degrading and bestial. The truth of the matter was that she feared there might still be an odour about her person which others might detect and turn to ridicule, added to which she had developed an actual dislike for the man who had, in her estimation, violated the common decencies of life. She became extremely neurotic, and constantly declared that all men were essentially animal in nature and unfit to associate with.

Mrs. A. R., a young woman afflicted with vaginismus due

to extensive lacerations of the hymen and vulva produced by too vigorous coitus on her wedding night, was treated in hospital for several weeks until all traces of the injuries were removed. She returned to her husband, who had been strongly averse to the publicity which he considered she had given to their private affairs, and who spoke to her rather heatedly when she arrived home. This so affected her that she refused to have anything more to do with him sexually. She developed an intense hatred of coitus, which she denounced freely to all her intimate friends. She also declared her antipathy towards the whole male sex, although she appeared to have an inclination for mixing with plenty of company. She eventually left her husband, but never associated with other men.

Mention has been made, under the heading of "Sexual Frigidity," of women who conceal their dislike for their husbands by feigning coldness and indifference to sexual intercourse. In some cases this dislike is not concealed, and a pronounced aversion is frankly stated, although the exact reason may not be given. It is, indeed, often somewhat difficult to differentiate between coldness and aversion, and the latter condition may be assumed to be merely an exaggeration of the former. As a matter of fact the woman may be neither sexually frigid nor averse to coitus. Thus, reference has already been made to the possibility that she is simply averse to sexual intercourse with her own husband because there is something about his physical condition which is repugnant to her. He may be dirty in his person and habits, he may have some objectionable deformity, he may be too timid or too brutal, there may be a hundred-and-one reasons why he is distasteful to her sexually, and yet apart from sexual congress she may be actually very fond of him. Should the reason be discovered and the fault remedied, the woman's aversion may be overcome, but, as already mentioned, the mental effect may persist long after the physical reason has disappeared. Indeed a fairly prolonged separation of the two parties is often advisable. A case illustrative of such a condition is as follows. A couple, apparently very well matched, lived together for a week after marriage, and then the wife refused further cohabitation with her husband and would give no definite reason for it. She

agreed to live together, but insisted upon occupying a separate bedroom. She was fond of her husband and quite willing to do all she could for him apart from cohabitation. As he was very much attached to her, he gave way to her demands, and matters went on in this way for more than two years. Business then took him abroad, and whilst he was away information reached the wife that he was leading a dissolute life. She blamed herself very much for this, and eventually confided in a friend the reason why she had refused her husband. He suffered from perspiring feet which emitted a most disagreeable odour when he removed his socks!

Such cases as this show how extremely difficult it may be to form a correct opinion of the cause of the woman's aversion. Time after time one finds that the diagnosis of sexual aversion is utterly incorrect, although it may have previously appeared proved up to the hilt. I recollect very well an army officer coming to consult me concerning his wife, who from being sexually somewhat cold had latterly developed an intense dislike of coitus. He was an active, full-blooded man, who found the restriction almost too much for him, and was sorely tempted to indulge himself elsewhere. He had resisted the impulse, however, and wanted to know what could be done to prevent disaster. I advised him to let me see his wife, and he did so. I had a long talk with her, and came to the conclusion that she was an eccentric, religious woman who had developed the idea that coitus was an immoral act. She frankly stated that she loathed the whole affair and would never again submit her body to pollution by sexual intercourse. I was obliged to tell the husband that the prospects were not very promising, and the matter ended there for the time being. Two years later he called to see me again and unfolded a most extraordinary story, supported by written proof. The supposed pious and pure wife had for many years been the mistress of a dissolute scoundrel whom she had actually kept in her own house during her husband's prolonged absences from home, and carefully smuggled out of his way when he was back on leave. An unexpected return enabled him to discover the deception. He found no one there as it happened, but was puzzled by a certain agitation in his wife's manner and by the fact that

she went out several times on the day of his arrival on trivial excuses. He concluded that she was merely upset that he had given her no warning of his return, and being very tired retired to bed. He fell asleep and awoke in the middle of the night to find himself alone. He got up and found his wife in bed in the next bedroom alone and fast asleep. As she usually slept in his room this surprised him considerably. He lay down again but could not sleep. He began to smoke cigarettes and lit one after another, throwing the stumps into the fireplace. The last stump fell short and set fire to the carpet. He jumped out of bed and rolled up the carpet to extinguish the flames. Underneath it he found a letter addressed to his wife. He opened it and read the contents. It was a demand for money, and in addition contained sentences that left no doubt as to the relations between the two parties. Further search brought to light correspondence of so filthy a nature that it would have enriched the literature of the most depraved prostitute. All kinds of unnatural practices were alluded to in unmistakable terms, and in addition to this the unhappy man discovered that his wife had actually involved him in debts of every description. I have mentioned this case specially in order to show how both husband and doctor may be deceived. The affair had been going on for many years, and yet the husband had not the slightest inkling that anything was amiss. The woman was about thirty-five years of age, of good family and with every outward appearance of respectability: she was not even of attractive exterior and her ordinary manners were unimpeachable. She dressed quietly and neatly and she was the mother of a child of ten, who was in complete ignorance of her evil ways.

Such cases are no doubt rare, but that they do occur cannot be denied. Generally speaking none of them exhibit any disease or malformation of the sex organs, and the condition is simply one of a normal woman who obtains no sexual satisfaction from her husband but whose passions are violently excited by another man.

As a typical example of true sexual aversion I would quote the following. A Mr. S. and his wife mutually agreed to consult me concerning their condition. The husband was

twenty-eight years of age and the wife twenty-six. They had been married for two and a half years. Both were in good general health. From the first the woman had tried to prevent her husband from having intercourse with her. Sexual congress had taken place twice, however, and was not difficult or painful, but on each occasion the wife had expressed her violent dislike for the act. When attempts were made to repeat it she experienced a sense of nausea and forced her husband to desist. She likened the process to defæcation, and said that it was so loathsome to her that she could not possibly put up with it. She was fond of her husband and desired to have a child by him, for which purpose she was prepared to have a trial made of artificial insemination, but she would not consent to any further coitus. Careful inquiry elicited no evidence of masturbation nor of any definite neurosis other than the peculiar dislike of coitus. She was not hysterical according to the husband's account, nor had she suffered from any illness. There was nothing about her husband that she objected to except his desire for coitus, which disgusted her intensely. She declared that the entrance of his turgid penis into her vagina was a sickening and bestial act which she could not tolerate, although it was not painful or even irritating. She denied that she had ever been influenced in the direction of sexual aversion by anyone, but stated that she had never experienced much desire for close association with men until she had fallen in love with her husband. She had never cared to read love stories or anything which might be termed erotic literature. She admitted that she considered herself abnormal on sexual matters, since none of her friends or acquaintances appeared to dislike marital relations. A careful examination of her generative organs did not reveal the slightest abnormality; there was no objection made to the vaginal exploration nor any apparent disgust; nor was it either difficult or painful. She was well nourished, typically female in form and decidedly good-looking. The husband was also good-looking, and of vigorous, muscular build: his sexual organs were well developed and healthy. Both parties were fond of outdoor life and played golf, tennis and other games together. They were in good circumstances and had no domestic or family

troubles beyond the sexual one. The wife's family had no neurotic history that could be traced.

The case was undoubtedly a difficult one to treat and I did not at once respond to the demand for artificial insemination, but suggested that the woman should take a course of treatment under a psycho-therapist. She agreed to do so, and benefit resulted to the extent that one further intercourse took place after which she relapsed into her former state. The war then broke out and her husband joined the army and was killed. She then expressed her determination to remain single, and naturally no further treatment was carried out.

CHAPTER VIII

MASTURBATION (ONANISM)

A GOOD deal of controversy has taken place amongst medical writers as to whether masturbation has any connection with sexual debility in women. The truth of the matter is, that sometimes it has and sometimes it has not. Everything depends upon the nervous temperament of the individual, and it must not be forgotten that masturbation may be the *result* of a disordered nervous system and not the *cause*.

It is probable that fewer girls masturbate than boys. The reason for this is that in most cases sexual desire in the female is more slowly developed as far as the external organs of generation are concerned. In many instances the girl, although she may evince marked desire for the companionship of the opposite sex, experiences no genital sensations in any way comparable to those developed by the male persons with whom she associates. The awaking of these sensations may proceed apace after repeated sexual intercourse, and it is well known that the most indifferent woman may develop into the most ardent under the stimulation of continued coitus with a husband or lover. In other words, sexual pleasure in women may be regarded as a more or less acquired desire and not one developed solely with their growth. There are, of course, numerous exceptions to this rule, but in a majority of cases the statement is correct. It must be remembered, however, that whilst in man sensuality is practically limited to the sexual organs, in women almost the whole of the surface of the body is sensually sensitive. It is true that after marriage this extensive distribution of the erotogenic area in the female becomes more limited, but it is always more extensive than in the male and generally involves the breasts and buttocks in addition to the genital region.

Masturbation in the male is most frequently met with in young boys; in the female it is more often noticed between

the ages of twenty-five and thirty-five, and especially in the unmarried or in widows. There is no doubt that the habit is easily developed in the latter, but on the whole I doubt very much if it is as common as some authorities make out. Masturbation in young adults is seldom practised without instruction or ideas derived from others at the commencement, although cases do occur where the girl has accidentally discovered the means of gratifying her sexual desires.

A form of masturbation known as "leg-rubbing" is, however, not very uncommon in quite young children, and consists merely in squeezing the thighs tightly together and then twisting the body so as to produce friction on the vulva. In one case that came under my notice the child was barely four years old and had become accustomed to perform this action several times a day. She had no sexual ideas at all, but confessed quite freely that the genital friction was a very agreeable sensation and that she liked doing it because "it made her feel nice." She could produce the sensation with very little effort, but always went red in the face during the process and perspired slightly. The habit had apparently commenced some time back, but the exact date could not be determined. It did not appear to have affected her health. She was cured by being compelled to wear a mechanical contrivance which prevented her from approximating her thighs.

In slightly older girls one sometimes discovers marked instances of the practice, but in nearly every case it has been the force of example that has originated the trouble. One depraved child will instruct dozens of others, and the readiness with which playmates pick up all sorts of bad habits from each other is a factor which has always to be taken seriously into account. In not a few cases the fault may be traced to the influence of a nursemaid or governess who is herself addicted to the habit. In others, boy acquaintances may have been the originators of the mischief, and occasionally perverted elderly men have been found to be concerned in the matter.

The most prolific source of the acquiring of the habit of self-abuse is unquestionably the boarding-school. Where a number of young girls are brought into intimate daily relationship

with each other, and where one or two have developed the practice of masturbation, it seems to be inevitable that a considerable proportion of the remainder will copy the evil example held out to them. That this is so, is well known, and in many girls' schools a careful watch is instituted to prevent such occurrences—unfortunately not always with success.

A similar state of things may be found amongst the girl-workers in factories and large emporiums. In some of the largest city establishments it is said that secret societies exist for the purpose of enabling the female devotees of masturbation to indulge themselves together amidst erotic surroundings. Whether this is so or not, one is unable to say definitely, but various communications on the subject would appear to suggest it. It is quite certain that many female sexual inverts do meet together for abnormal sexual purposes in many of the large cities, but masturbation *per se* is not the same thing as sexual inversion, and a clear line of distinction must be drawn between the two.

The women of central and southern Europe are certainly more addicted to masturbation than those of the north. Their more ardent temperament and the earlier onset of puberty probably account for this. During the recent war, owing to the prolonged absence of the men from home, a decided increase in the habit was generally noted in the towns and cities of all the countries involved. It will be easily understood that no exact statistics are available, and that the information obtained on this point is merely that of certain observers who have made a study of the subject; but there seems no reason to doubt its correctness. The medical officer of a certain Government factory in the south informed me that during rest periods certain of the employees—who were all women—masturbated in private groups when none of the overlookers were about. And one has heard similar accounts from other sources.

Masturbation in women is performed either by (1) friction of some part of the external genitals, (2) the insertion of some object resembling the male penis into the vagina, (3) the introduction of thin stiff articles into the urethra.

Throughout the East masturbation is quite common and is thought nothing of. Japanese women of a certain class use a couple of metallic balls of small size, one light and empty, the other heavy and filled with mercury: these are inserted into the vagina and produce voluptuous sensations on slight movements of the pelvis (*rin-no-tama*). In China artificial penes are sold openly. In India wax instruments of pleasure are largely employed by the native women. In many Mohammedan harems very ingenious artificial penes are used. Some of these exactly copy an erect penis with attached testicles. In Europe similar articles were formerly in considerable demand, and in Paris, London and other large towns they are still sold to-day, although not so extensively as before. The use of domestic and vegetable objects for a similar purpose is not unknown and has been frequently commented upon by various writers.

It would serve no useful purpose here to enter into details of the various objects and implements employed for the purpose of producing auto-erotic gratification in women. An elaborate account is given by Havelock Ellis, whose work on *The Psychology of Sex* is a mine of information for the curious student. Mention, however, of the use of hairpins introduced into the urethra may be made, since many cases of stone in the female bladder appear to be directly traceable to the practice of auto-erotism induced by this very common domestic article, which sometimes becomes sucked into the bladder from the urethra during the process.

The normally-minded physician has little inclination to study the vast amount of somewhat pornographic literature which has grown up around the subject of masturbation. It is sufficient for us to remember that the practice exists and that it produces certain harmful effects upon the constitution if it be carried to excess. If it is only occasionally indulged in, the strong probability is that it produces no evil results whatever. One reason for this is that women delinquents have not received the sweeping condemnation which has been meted out to male masturbators, many of whom become convinced that they are ruined for life or have committed the unpardonable sin by abusing themselves, and who may

become mentally affected in consequence. As young females are not generally terrified by being told bogey stories of this kind, and as they do not usually go to extremes with the habit, they do not, as a rule, suffer serious harm therefrom unless they are markedly neurasthenic, or debilitated from other causes.

Again, many girls when reasoned with, and when the possible dangers are carefully explained to them, voluntarily give up the habit. Others stop it on becoming married. Others, again, discontinue the practice when circumstances place them in the company of persons for whom they have a liking and whose influence is of a high moral character.

Women who carry masturbation to excess are generally highly neurotic, and it is probable that if they did not contract this failing they would adopt some other. It is also undeniable that even in the worst cases definitely harmful results do not always ensue.

In the case of girls of a highly passionate and erotic disposition it may be that occasional masturbation saves them from other disasters. I know of more than one instance where a young woman escaped the risk of venereal disease and an illegitimate pregnancy by the act of relieving her overcharged sexual organs mechanically; and although one always strongly denounces the practice it must be admitted that sometimes it may be excusable. Modern civilisation, with its tendency to delayed marriage and the tight rein which it holds on young women surrounded by every form of sexual excitement, has a good deal to answer for. If sometimes the strain becomes too great and something has to give way, it may be better to accept the lesser of two evils.

In considering what debilitating results may follow masturbation, we must first of all admit that strictly moderate or merely occasional indulgence may produce no bad effects whatever. Indeed in some instances the relief to very highly strung women may do good by preventing hysteria or prostitution. One almost hesitates to express an opinion of this kind, which of course should never be given to a patient; but to medical men it is at least desirable that the truth should be admitted. More commonly, however, the habit is indulged

in to some degree of excess and requires dealing with firmly. The patient is nervous and excitable, or morose and melancholic; she complains of backache and headache and of indefinite aches and pains in the pelvis; suffers from leucorrhœa and sometimes irregular menstruation. Other symptoms are: fatigue on slight exertion, noises in the head and ears, digestive disturbances and constipation, neuralgia, hemicrania, photopsia, pressure on the head, pollutions, hyper-excitability and the various symptoms of neurasthenia. On examination the nymphæ may be found enlarged and the sensitiveness of the parts markedly increased. If the habit is continued and the patient marries there may be an aversion for natural coitus, and married life may be a failure in consequence. In this connection it may be as well to state here that women who have never before masturbated, may do so when married, owing to the husband experiencing the sexual orgasm so quickly that the wife has not the time to derive any satisfaction from coitus. In consequence of this she may resort to artificial means for completing her own pleasure. This proceeding in time may be altogether substituted for the unsatisfactory normal intercourse and so lead to much domestic unhappiness. There is no doubt that in most cases masturbation practised to excess leads to general ill-health and the development of neurasthenia, but there are undoubted exceptions to this rule, and one has met with several instances of women who have confessed to masturbating almost daily, and yet appear to have suffered no bad results in consequence, but who have, on the contrary, stated that the act soothed their nervous systems and enabled them to perform their daily avocations satisfactorily and efficiently. In one case that I had occasion to deal with professionally the woman was a public speaker and women's leader of very high reputation and ability.

Since the clitoris is the part of the vulva which responds most easily to the stimulus of hand friction, it was some time ago seriously proposed that this organ should be excised in all cases of hyper-sensitive women who gave way to masturbation. A number of clitoridectomies having been performed without the slightest effect in the desired direction,

the operation fell into disrepute and is not now performed by reputable surgeons.

Injuries to the vulva are seldom caused by masturbation, but injuries to the urethra and vagina are not uncommon.

Persistent leucorrhœa of an offensive nature in young unmarried women is always suspicious of foreign bodies being present in the vagina, and an examination should be made in such cases. The most extraordinary objects have been discovered in the vaginæ of masturbating women—handkerchiefs, ornaments, brushes, rubber-balls, and so on. When the patient is unable to remove them she will sometimes consult a doctor at once, but more often she leaves the matter until discomfort and an offensive discharge makes assistance more urgent. Hairpins, slate-pencils and similar objects introduced into the urethra not infrequently in one way or another find their way into the bladder, where they become encrusted with phosphates and tend to form calculi. If not too large they can be removed *per urethram*, otherwise a suprapubic operation may be necessary.

I have seen a few cases of intractable eczema of the vulva due to masturbation—one especially severe instance was produced by the employment of an artificial phallus. As a rule skin irritation is not very common and the parts appear to be able to stand fairly severe friction or mechanical irritation without damage. This recuperative power is doubtless due to the very efficient blood supply to the external genitals.

The general treatment of masturbation is by persuasion and moral influence, plus an attempt to secure a suitable marriage if the patient be a single woman.

Bromides, valerian, sumbul, and a host of other sedatives do good at times, but medical treatment cannot be continued indefinitely, and care must be taken to avoid skin eruptions and gastro-intestinal disturbances thereby.

Irritant applications to the vulva are sometimes successful for a short period, but the habit may be resumed when the parts become normal again. Mechanical arrangements which prevent the vulva from being touched have not been a success. They are either inefficient or too cumbersome; moreover, anyone who is not an infant could scarcely be prevented from

secretly removing them when it was so desired. A complete change of surroundings and companionship often works wonders. Where the habit is discovered in a school-girl who has learnt it from school companions, she should be removed from the evil influences at once and strong moral suasion brought to bear upon her.

In older girls and young women marriage is often the only solution of the difficulty. Where the patient is already married and masturbation has been induced by the too rapid completion of coitus on the husband's part, he should be instructed to make every effort to remedy his own defects. He must "prepare" his wife for the sexual act by previously stimulating her more slowly responding sexual organs, remembering that kissing, fondling and embracing may in part take the place of vaginal stimulation. When the wife is fully worked up to the part the short period devoted to actual coitus which is all that the husband can manage may be sufficient to produce the actual orgasm in the woman. If the orgasm is properly produced during coitus the wife will soon give up the habit of masturbation.

Where pre-nuptial masturbation has so altered the patient's sexual passions that she has no inclination for natural coitus, it becomes difficult or impossible to effect a cure. Occasionally the birth of a child may produce an alteration, and a few cases are recorded where the administration of extracts of endocrinous glands have done a little good, but on the whole the condition is rather hopeless. On careful investigation, however, it will generally be found that some of these women are not quite normal mentally (and also that masturbation has probably resulted from this deficiency and not been the cause of it).

One has noticed a peculiar feature in certain cases of excessive masturbation in married women. They appear to be able to stand any amount of vulval and vaginal irritation artificially produced by themselves, but complain of dyspareunia on coitus with their husbands. The explanation is doubtless that the erotic excitement produced by the masturbation completely nullifies any pain that may be actually caused by the act, whereas in normal coitus the absence of any orgasm

permits the transmission of painful sensations to the higher centres.

The influence of occupation upon the production of masturbating habits is probably over-estimated. Thus it has been stated that women who are obliged to work sewing-machines by the foot are liable to contract the habit. Whilst admitting that semptresses may become addicted to self-abuse, one rather inclines to the view that they do so because they are influenced by the bad example of their workmates. The instances quoted by Pouillet, where, in a workroom occupied by some thirty female machinists, he noticed one after another of the women producing an orgasm by working their machines with uncontrollable rapidity, is unconvincing, and points more strongly to the force of pernicious example than to any erotic influence of the necessary movement of the women's thighs.

It is also stated by Moll and other writers that cycling in young women may produce sexual excitement and even a distinct orgasm. Unless the saddle is improperly constructed, so that the peak is too high and rubs against the vulva, one would be inclined to say that an orgasm could only be produced in a very hyper-sensitive woman who was already addicted to the habit. Such hyper-sensitive persons can easily excite themselves by simple thigh-rubbing or by merely pressing the thighs closely together. They may even produce an orgasm by crossing their legs and swinging the one foot backwards and forwards, and cases are known where passionate women may obtain sexual gratification by merely concentrating their thoughts upon erotic subjects.

Auto-erotism during sleep is more common in women who have been accustomed to sexual intercourse than in virgins, but even in the latter erotic dreams accompanied by emissions and subsequent relief are not unknown. Such occurrences must be treated as normal conditions unless they happen too frequently. They are mentioned here because they are often produced by unconscious masturbation, the patient on awakening being unaware that she has actually physically produced the emission. Occasionally this trouble in hysterical women leads to disagreeable legal proceedings, the victim of

a particularly vivid and lascivious dream accusing the male person, about whom she happens to have dreamt, of having had intercourse with her during the night and against her will. Under certain conditions it can easily be imagined that the accused person may be put to much trouble and difficulty in order to clear himself, for it must also be remembered that a neurotic girl with masturbating tendencies is not over-scrupulous in the methods she adopts to bolster up her case. In this connection it may not be out of place to warn the medical practitioner against making any vaginal examination of such an individual, or even holding a prolonged conversation with her, unless a reliable third party be present.

There is no doubt that the reading of erotic literature has a most pernicious effect upon certain females, and in attempting the cure of girl masturbators every effort must be made to prevent them from obtaining access to such books. It has been proved, time after time, that the casual perusal of a lascivious novel has been the starting-point of a young girl developing habits which may take years of care and supervision to eradicate. It is hardly possible to lay too much stress on this point, although it is one that concerns parents and guardians more than the family medical adviser.

As to whether dancing is productive of masturbation or not there is a difference of opinion, but certainly some of the modern dances necessitate so close an application of the woman's body to that of her partner that there is no doubt of their erotic influence. In fact, one wonders if in order to make dancing more popular and profitable, the interested inventors of certain kinds of new dances do not deliberately set their heads together to discover how sexual stimulation of both male and female can be achieved without causing too great an outcry. Ultra-modern dancing is nothing more than a form of mild mutual masturbation to many persons of a passionate and hyper-sensitive temperament. With the present-day craze for dancing teas and suppers, day-dancing and night-dancing, one cannot be surprised if bad habits develop.

The cinema theatre, with its perpetual darkness as far as the audience is concerned, is also responsible for a certain amount of moral harm, but usually for other varieties than

self-abuse. It is, of course, easy to blame a hundred-and-one products of modern civilisation for tendencies in an immoral direction, but one must also remember that masturbation was a habit practised as far back as records are available, that it existed amongst the most primitive races and under conditions entirely devoid of any artificial stimulus, and that it is performed in various ways by almost every kind of animal. It would appear, therefore, that whilst the practice is universally condemned, it is scarcely consistent with scientific knowledge to condemn it in the sweeping way that some writers consider necessary. It is granted, of course, that the act is always reprehensible and that in excess it is definitely and certainly injurious to the system.

CHAPTER IX

SEXUAL PERVERSIONS

For anatomical reasons the variety of sexual perversions in woman is somewhat more limited than in the male, but for reasons of a nervous origin this limitation is probably compensated for in other ways. If, however, we exclude masturbation, which is undoubtedly common amongst women, and which by some authors is scarcely regarded as a true perversion, the actual amount of sexual aberration amongst women in good general health is small. A tremendous amount of literature has been written by more or less pornographic authors around the subject and has invested it with an importance that it scarcely deserves, but which has been seized upon by unhealthy minds as an excuse for condoning offences against the good morals of respectable society by regarding such offences as inevitable and even privileged in certain cases. Regarded in the light of cold common sense it is more than likely that the majority of sexual perverts is composed of persons who are either mentally unstable or suffering from disease or physical abnormalities.

In mentally unstable persons, simple weak-mindedness, epilepsy, neurasthenia, and hysteria all play an important part, whilst the influence of hereditary mental taints requires serious consideration. The actual mental deficiency may be so carefully concealed, however, that it is almost impossible to obtain its verification. Disease in the way of venereal infection and maladies of the sexual organs accounts for many unnatural practices, whilst physical abnormalities affecting especially the external organs of generation will explain certain rare cases of double sex instincts.

One condition which is difficult of explanation is homosexuality, where an apparently normally-formed healthy

and intelligent female is attracted not by the opposite sex but by her own. Whilst inclined to regard this also as due to mental causes, it must be admitted that sometimes one can obtain no certain evidence of such, and that possibly the glands of internal secretion may be at fault or that in some way the sexual organs are abnormally constituted or defective. Proof of these conditions is naturally almost impossible, since both endocrinous glands and internal sexual organs are hidden from view during life and autopsies of such cases are scarcely ever obtainable.

It is important to remember that sexual impulses of all kinds are intimately connected with certain areas in the cortex of the brain. There is, in fact, a cerebral centre which controls these impulses and which is stimulated to activity both by mental impressions and by the action of nerves connected with the genital organs, the breasts and certain other parts of the body. It will thus be seen that if the cerebral centre is defective or difficult to arouse, or where the conducting tracts are defective or blocked in some way, sexual impulses may be entirely wanting or deficient or irregular.

In the young girl the cerebral sex-centre is more or less dormant unless it has been unnaturally stimulated; and in the elderly woman atrophy and disuse of the sexual organs put an end to peripheral stimuli, whilst the centre itself is also practically inactive. Apart from the natural influence of age, certain diseases and morbid states of the body produce a dulling of the centre and a failure in the conducting tracts. Thus, alcoholism, drug habits, sexual excesses, general weakness, obesity, diabetes, serious organic maladies and degenerative changes in the brain and spinal cord may all greatly diminish sexual desires. But in some instances these conditions, although diminishing normal sexual desires, tend to produce an inclination for abnormal forms of sexual gratification. This has been explained as due to irritation of the sexual centre produced by impoverished blood plus irregular nerve conduction. There is doubtless a good deal to be said in support of this view, but it will be understood that absolute proof is wanting and that it is nothing more than a theory.

Abnormal sexual impulses have also been associated with

deficient development of the uterus and annexa, and many authorities attach considerable importance to this, and also to malformations, malpositions and chronic inflammatory states of both internal and external generative organs. The main source of sexual perversions, however, is the force of corrupt example upon weak-willed persons. It is improbable that these two factors are ever absent in a well-marked case, but it must be understood that "example" is meant to include not only what is seen, but what is heard, read, or otherwise conveyed to the intelligence.

Congenital perversions are extremely rare, and although it cannot be denied that they do exist, they are always very difficult to prove. Moreover, one meets with instances now and again where grown women have not the slightest idea of what normal intercourse really is. If such a person has contracted abnormal habits in order to gratify certain strong impulses of nature, can she be said to be perverted in the true sense of the word?

Again, let us consider the case of a young girl with no knowledge of sexual matters beyond faint ideas that it is dangerous to have intimate relationship with young men. Let us suppose that she is thrown into close contact with another young girl who is similarly ignorant. Let us also suppose that both have strong sexual desires which they do not understand. If by certain means they discover that they can gratify their torturing impulses, must they be stigmatised as sexual perverts of the worst description? Since they are unaware that they are doing wrong, and since in most cases they voluntarily give up these practices as soon as they become properly instructed, it may be urged that the originating cause of the perversion is merely lack of proper instruction and warning. Where, however, the woman is well acquainted with normal sexual intercourse, but finds it, even under the best conditions, unsatisfactory or repulsive, and prefers to indulge in unnatural practices or to obtain some kind of gratification with an individual of her own sex, it is obviously legitimate to consider her as a sexual pervert. But it must also be remembered that a dislike for coitus with the male may be the result of brutality on the part of the husband or lover, or follow infection

with venereal disease, or be due to an inordinate fear of pregnancy, or be caused (as is often the case with prostitutes) by satiety with constant intercourse with various men for whom they entertain no feelings of affection.

Perversion may also develop in women by a kind of magnetic attraction towards some sensual member of their own sex, when the natural partner has in some way disappointed or displeased them and they see no hope of sexual gratification in a legitimate direction. Such are not cases of primarily perverted senses. They are acquired perversions. There is a definite reason why the woman dislikes normal coitus, and abnormal practices are only acquired as a result of example or knowledge obtained from others.

In cases of apparently true sexual perversion where the woman inclines only towards persons of her own sex, she is designated as homosexual (urnindes). Such women engage in various forms of abnormal practices with other females (Uranism, Tribadism, Lesbianism). Tribadism consists in mutual masturbation, or if the one woman has a sufficiently enlarged clitoris, in the introduction of this organ into the vagina of the other. The so-called Lesbian love is a lingual excitation of the vulva, and is supposed to have been practised in ancient times by the women of Lesbos—hence the name. Intercourse by means of an artificial phallus made to represent the male organ and attached by bands to the genital organs of the woman assuming the man's part, is a third form of obtaining sexual gratification which has been adopted. Very elaborate articles of this nature have been described, and it would appear that their use was common amongst the ancient Greeks, and that even at the present day specimens are not unobtainable in the large towns of various countries. Von Maschka describes an indiarubber apparatus resembling in shape and size the male penis and testicles: it could be filled with warm milk and the contents expressed by pressure so as to counterfeit an ejaculation. To the various forms of artificial penes the appellations of godemichés, dildoes, bijoux indiscrets, consolateurs, etc., were given.

In some cases homosexual women have a well-marked tendency towards male habits and mode of dress. They smoke,

drink, wear men's collars and ties and have their clothes fashioned to resemble male attire as closely as possible. They cut their hair short and dispense with corsets and feminine underwear and jewellery. When able to do so they assume ordinary men's attire. Instances are frequently recorded of women who have passed the major part of their lives disguised as men, and where the knowledge of their real sex has only been discovered by accident or at death. It is likely that most of these persons are homosexuals, and where a so-called "marriage" has taken place the matter is placed beyond doubt. Such post-mortems as have been made, and careful pelvic examinations of others during life, reveal no abnormality of the sexual organs. The contour of the body is usually quite feminine, but sometimes a growth of hair about the upper lip and chin is noticed.

Cases are also known where the perverted woman has had intercourse with dogs, monkeys and other animals. It is even stated that private exhibitions of this form of sodomy were at one time given in certain continental cities.

Of all forms of sexual perversions it is probable that tribadism is the most widely diffused at the present day. One does not mean by this that the practice is a common one, but it is somewhat more prevalent than the average person would suspect, especially amongst women past middle age who are unable or unwilling to marry and have the means to secure the services of some unfortunate girl who will minister to their sexual wants. The subject is an unpleasant one to discuss, but fashionable physicians at various continental pleasure resorts have from time to time reported cases of this nature. Since the law is unable to deal with them, one can only consider such women as outside the social pale and as persons with whom no respectable individual should have any dealings.

Tribadism is said to be common amongst prostitutes, and in certain brothels apartments are reserved for these practices. It is also reported that in prisons where very low-class women are confined this form of vice occasionally becomes very prevalent and is difficult to eradicate.

A confirmed tribadist is a most dangerous member of society. She is capable of perverting any number of innocent young

girls and even children. She herself is usually a neurasthenic individual, irresponsible, hysterical and often mentally deranged. When not belonging to the prostitute class, she forms violent attachments to the partner of her perverted pleasures, is maniacally jealous if any other woman or man comes between them and will stop at no crime to prevent her " friend " from leaving her or marrying. She adopts a peculiar jargon to express the bodily and mental charms of her " friend," and generally behaves as though she were a young man violently in love with some beautiful and adorable woman. Balzac's novel *La Fille aux Yeux d'Or* deals with this kind of vice, and numerous other authors have referred to it in unequivocal terms. The whole subject is repugnant in the extreme to the normally minded individual, but it is certainly necessary that the practising physician and the lawyer should be well posted in the details of this particular form of sex perversion.

Cases arise from time to time where a parent or guardian is puzzled by the discovery of an extraordinary love-letter which has been received by a young girl. The passionate love expressed in the epistle induces the belief that it is from a young man who is concealing his identity. When on investigation this proves to be incorrect the puzzle may remain unsolved by the inexperienced. Parents, however, would be well advised to nip such problems in the bud without further delay. In many cases it is possible that there is nothing beyond a rather amorous friendship at issue, but it is best to take no risks and to put an end to intimacy that is on a suspicious footing. Unfortunately, most parents are unaware of the existence of such a thing as sexual perversion and so are not in a position to deal with it. I say " unfortunately," and yet, on the other hand, if every parent were warned of all the evils of society it might lead many to suspect danger in perfectly innocent friendships and produce much unnecessary mental suffering. The problem is possibly one that we as medical men ought to be more frequently consulted about than we are.

The treatment of sexual perversions is a matter that certainly concerns the practising physician, but unhappily he is not able to do very much towards effecting a cure unless the vice has arisen from the effects of disease. He can at all

events point out the dangers of the habit and purposely draw a lurid picture of the disasters which may follow if it be not at once discontinued. In certain cases he may also awaken a feeling of disgust which may suffice to stop the perversion forthwith; and it should be remembered that sometimes disgust is a more potent factor than fear in influencing the patient in the right direction. But it must be admitted that very often a confirmed pervert is entirely uninfluenced by medical advice, and for such individuals enforced seclusion may be the only remedy, although occasionally psychotherapy has produced good results and should therefore be given a trial. In young girls the exercise of strong parental authority for a prolonged period, followed perhaps by a suitable marriage, may prove efficacious, but it is unwise for the practitioner to urge marriage on his own responsibility, since he cannot definitely state that the result will be a happy one. The prospective husband has certainly every right to be informed of the true state of affairs before he is irrevocably involved.

Where the perversion is associated with some actual disease or irregularity the doctor may do a good deal. Irritation of the external genitals due to eczema or other skin diseases can be cured by efficient treatment. The local effects of diabetic urine and of vermes may be counteracted by attention to the exciting cause. Malpositions of the uterus require correction, and uterine catarrh with an irritating discharge must receive proper care. The prevention of constipation is important. If there is any constitutional disorder such as anæmia, chlorosis, hysteria, dyspepsia, or other nervous affection, hygiene and suitable medication may effect good results. Amenorrhœa, menorrhagia and dysmenorrhœa, upon whatever cause depending, demand the most careful attention. Dyspareunia in the married may be cured by operative interference. In addition, the constant supervision of the patient, complete isolation from her friends and acquaintances, and, later on, removal to fresh surroundings must be advocated whenever possible. Sound moral advice and the employment of the patient in some suitable occupation when fit, are also necessary in order to direct her thoughts into healthy channels and not leave her with too much idle time on her hands. A happy

marriage may then end the trouble and blot out recollections of past follies.

In those cases where no disease or abnormality is discoverable, and where the patient appears to have what has been described by one authority as "a male soul in a female body," there is obviously nothing to be done beyond advising the person's seclusion to prevent open scandal. The condition is incurable and must be regarded as one of mental alienation.

Instances of sexual perversion associated with gross malformations of the external genitals, where it is difficult to ascertain the actual sex, can only be considered as unfortunate examples of freaks of Nature. They are manifestly entitled to our sympathy, but we can do nothing for them.

Before concluding this chapter I would direct passing attention to a form of sexual perversion which, whilst somewhat common in men, is decidedly rare amongst females. I refer to algolagnia, or painful voluptuousness, of which two main types are distinguished—sadism and masochism. Sadism, so named after an eccentric voluptuary, the Marquis de Sade, who wrote extensively on the subject, refers to the infliction of pain upon others in order to produce sexual gratification. Masochism, or passive algolagnia, named after another sensualist author, Sacher-Masoch, is the term used to designate voluptuousness excited by the act of being personally tortured. It is well known that amongst certain depraved men sexual excitement is only produced by inflicting injuries upon other men or upon women or animals. Such atrocities as the celebrated "Jack the Ripper" crimes; outrages upon little girls which are frequently reported in the Press, and are often associated with actual murder of the unhappy victim; outrages upon cattle—cattle-maiming; certain forms of vitriol throwing; offences against property; the cutting and stabbing of perfectly innocent persons of either sex; the cutting-off of women's hair and the mutilation of their clothes; and various forms of flagellation or whipping of the unclothed body, are all instances of the acts of sexually perverted individuals who employ these means to induce a sexual orgasm in themselves. The sense of voluptuousness is only aroused by the suffering of others, by the sight of wounds and the flowing of blood,

by screams of pain or distress, or by witnessing scenes of wanton destruction and mutilation. The reason for many extraordinary crimes recorded in the newspapers, and inexplicable to those who have not studied the subject, is clear enough to the initiated. "Lust-murder" is unfortunately not unknown in every community in the world, and "girl-stabbers" and "cut-throats" of various descriptions are only too often sexual perverts of the sadistic type. The masochist, on the other hand, seeks to inflict pain, degradation and abasement upon himself, usually through the medium of one of the opposite sex. He desires women to torture him by cutting, stabbing or burning his body, and devises the most extraordinary instruments and means to effect his purpose. He seeks out women who will make him perform the most debasing acts for them, and will even descend to coprolagnia and urolagnia—names which sufficiently explain their loathsomeness. The greater the torture or the more loathsome the act, the sooner will he experience the sense of voluptuousness and thus achieve his purpose.

Amongst women, sadism and masochism are very rare vices, with perhaps one exception—that of flagellation. It is currently reported that a certain number of sexually perverted women obtain sexual gratification by having themselves whipped across the bared nates, and according to several well-known authorities there are good grounds for accepting this statement as correct. Some writers also believe that certain forms of kleptomania are due to sexual perversion, and assert that many women kleptomaniacs have confessed that they were induced to steal because the act gave them sexual pleasures. The condition appears to be most developed at the period of the menopause.

CHAPTER X

THE EFFECTS OF DISEASE UPON SEXUALITY

ALMOST every gynæcological affection may be discussed under this heading: that is to say, almost any affection or disease connected with either the internal or external female organs of generation is liable to produce some form of sexual debility. Moreover, this possibility has, apparently, very little to do with the seriousness of the affection. Thus, carcinoma of the uterus in early stages may not seriously interfere with sexual desire or with the enjoyment of coitus, whilst a tiny urethral caruncle or a sensitive tag of ruptured hymen may cause such an amount of dyspareunia as to render the act almost impossible and the very thought of it repugnant. Again, a malignant ovarian growth in its early stages not infrequently appears to have little detrimental effect upon the sex feelings, whilst a simple prolapsed ovary may completely inhibit sexual desire on account of the pain which normal intercourse produces. A case of unruptured hymen with concealed products of menstruation accumulated behind it, may cause very few symptoms, and the woman may have strong sexual feelings, whilst coitus is, of course, impracticable. An infantile uterus in a patient who has never menstruated is not inconsistent with average sexual passions. Large fibroid tumours do not appear, in some cases, to interfere with the patient's enjoyment of intercourse. And so on. Still, generally speaking, most diseases or abnormalities of the sexual organs either directly diminish sexual desire by reason of local pain and tenderness, or by pain on coitus, or by the production of abnormal sensations; or act indirectly by lowering the general health and producing disease of other organs and parts. Certain ovarian affections appear to have the result of increasing sexual desire, but as these affections are usually congestive or inflammatory in nature, it may be that they are consequences and not causes of the erotic condition.

Some of the milder types of vulvitis and vaginitis due to accidental causes may lead to a stimulation of the sexual appetite or dispose the patient to habits of self-abuse for obvious reasons. Any condition which leads to pelvic congestion (without any actual disease being present) may occasionally have the effect of increasing sexual feeling, but more often tends to the production of pelvic malaise and general weakness, which may become very marked if the patient is obliged to carry out arduous work or to remain standing for long periods.

We shall now proceed to review briefly some of the common gynæcological conditions which affect the sexual life of women, it being understood that little more than an enumeration of them will be attempted, and that for details of diagnosis and treatment a work on gynæcology must necessarily be consulted.

Uterine Displacements.—Exaggeration of the normal anteflexion and anteversion is usually associated with under-development of the uterus and a general infantile condition of the sex organs. In marked cases there is a conical cervix with a pinhole os, and menstruation may be slight or practically absent, or there may be dysmenorrhœa. Retroflexion is a condition very commonly associated with sexual debility. In the absence of definite disease a retroflexion of the uterus is the most frequent cause of pelvic discomfort, alterations in sexual feelings and indefinite ill-health of the patient. The association of retroflexion with these various symptoms may be accidental in a proportion of cases, but it is nevertheless a real cause of trouble in many instances. Retroflexion in young women is often due to distended bladder produced by holding the urine too long, plus some straining such as sudden muscular effort or simply that of chronic constipation.

Displacements of the uterus are often found in women who are sterile, but it cannot always be proved that there is any connection between the two conditions. Displacement plus stenosis of the cervix is probably more important in this relationship, but even here there are numerous exceptions. It is stated by some authorities that versions are more important than flexions in causing sterility, since in version the external os is carried more out of reach of the glans penis.

Displacements of the virgin uterus where there is no underdevelopment or other abnormality seldom affect the sexual

instincts. In women who have had a family the condition, being often associated with an enlarged uterus which may be affected with metritis, is somewhat different. These patients are generally below par as regards their general health and frequently suffer also from inflammatory conditions of the uterine adnexa; hence they are often found to have diminished sexual feelings, are frequently nervous and irritable, and may be afflicted with chronic gastro-intestinal disorders, especially dyspepsia. The dyspeptic disturbances due to an enlarged and displaced uterus and the marital troubles following this chronic abdominal debility are certainly of considerable moment, and may often be avoided or very much mitigated by correcting malpositions.

Old-standing lacerations of the cervix, even if extensive, do not generally produce much appreciable effect upon the sexual appetite. By causing an irritating leucorrhœa, however, they may be productive of annoyance and lessen the husband's inclination for coitus. The latter possibility in itself may be a strong reason for advocating operative interference.

The various forms of endometritis are also usually associated with an irritating or offensive discharge, and the general health may become debilitated to an extent which is frequently serious unless the complaint is effectively treated. Acute inflammations may follow gonorrhœa, labour, abortion, sloughing fibroids or lack of asepsis in intrauterine operations. Chronic forms often follow acute infection, repeated pregnancies and abortions, lacerations and displacements, the use of pessaries, and so on. All varieties naturally interfere with sexual desire, and in the acute form the patient is so ill that sexual matters cannot be thought of. If recovery from the inflammation takes place the uterus may nevertheless be bound down in an abnormal position by adhesions, and the surrounding cellular tissue so much thickened and cicatrised that the patient is rendered a chronic invalid suffering from constant pelvic pain, headaches, insomnia, irregular and painful menstruation, and devoid of any desire for sexual intercourse.

Practically the same condition of things may result from salpingitis and ovaritis, but here even more serious consequences are apt to follow from the frequent implication of the pelvic peritoneum, the tendency for abscesses to form and the possible

entire destruction of the tubes and ovaries, or their conversion into useless appendages as far as procreation is concerned. Sometimes, of course, complete recovery takes place, but more often so much damage is inflicted that the subsequent medical history of the patient is one long record of suffering and misery. Thus, sterility is common; there is pain on coitus, on micturition and on defæcation; the lower part of the abdomen is distended and painful on pressure; pelvic pain or discomfort is always present; menstruation is excessive, painful, or irregular, or all three; abscesses may form and burst into the peritoneum, bladder, vagina, or intestines; if conception should take place, extrauterine pregnancy may occur; frequently operative interference is imperative; and nearly always sexual desire is lost. Where the inflamed appendages have fallen or become dragged into Douglas's pouch, it will be easily understood that long after the acuteness of the trouble has passed off, dyspareunia remains and renders intercourse prohibitive. Quite apart from inflammatory mischief, an ovary prolapsed into this situation may be the cause of sickening pain on coitus, and unless submitted to operative replacement will tend to prohibit intercourse.

Tumours of the uterus and adnexa produce very varied effects upon the sexual feelings according to their nature, position and dimensions. Thus, large ovarian cysts may so interfere with the abdominal contents and press so much upon the lungs as to render the least exertion difficult. A patient who can only breathe with difficulty and is unable to move about can have but little thought for sexual matters. A fibroid may also by its bulk interfere with coitus, whilst if it be of the bleeding variety the woman may suffer such losses that she becomes devoid of all vitality. Small benign tumours which do not cause severe losses of blood have very little influence on sexuality, but malignant growths once past their initial stage, quickly debilitate their victims.

The most common type of malignant disease is cancer of the uterus, and the cervix is affected much more often than the body. The growth usually begins somewhere about the menopause and in women who have borne children. Starting as a small hard nodule in the external os, it soon necroses, ulcerates, breaks down and bleeds. The foul-smelling, bleeding,

septic mass spreads rapidly and involves all surrounding parts. The body of the uterus, the bladder, vagina and rectum may all become involved, and infiltration of the broad ligaments and the cellular tissue of the pelvis proceeds apace. The neighbouring glands are infected and the growth binds all the parts together and renders them fixed and incapable of separation. At the beginning there is little or no pain and the sexual feelings are not much diminished, but there is hæmorrhage after coitus and much irritation from a watery discharge. Later, the ulceration, pain and hæmorrhage destroy all pleasurable ideas of sex and render intercourse impossible for obvious reasons. Malignant ovarian disease occasionally may not affect the sexual appetite at all. I have seen cases in young married women where intercourse was desired and took place frequently until a few days before death. Indeed it would appear that provided the vagina and vulva are normal and the nerve communications normal, libido is not necessarily abolished in young and middle-aged women even in the presence of the most serious diseases. On the other hand, minor troubles of the external genitals and purely functional nervous disorders may suffice to abolish all sexual desire or to produce dyspareunia if intercourse be attempted.

Vulvitis and vaginitis, from whatever cause originating, urethritis, urethral caruncle, Bartholinitis, kraurosis vulvæ, leukoplakia, tears and lacerations of the external genitals, new growths round the vulva and vagina, and vaginismus of purely nervous origin, are all common causes of diminution of sexual desire and of dyspareunia—more especially the latter. Pruritus or itching of the vulva is a distressing condition which may produce such severe local irritation as to give rise to much sexual distress. It is usually associated with vaginal or uterine discharge, parasites, diabetes, jaundice, nephritis, cystitis or some form of vaginal fistula.

Finally, reference must be made to the common abnormalities of menstruation. Amenorrhœa, menorrhagia, metrorrhagia and dysmenorrhœa are not, of course, diseases in themselves; they are only symptoms of diseases or abnormalities. But apart from the question of disease it is well known that any irregularity in the menstrual flow has a profound effect upon

the mind of the individual. A preliminary consideration of the etiology of these various conditions is necessary before one can remark on their sexual influences. The common causes of amenorrhœa are anæmia, chlorosis, phthisis, cold and chills, shock, changes of climate and occupation, general ill-health, prolonged worry or strong emotions, and physiological causes such as pregnancy, lactation and the menopause. More rarely amenorrhœa may be due to maldevelopment of the uterus and ovaries, or to atresia of the vagina or cervix.

It will, of course, follow operative removal of the uterus or ovaries. Too frequent pregnancies and prolonged lactations tend to produce amenorrhœa, whilst the fear of pregnancy or a strong desire for it often appears to act with surprising promptitude in the same direction.

Menorrhagia is often a feature of heart, kidney and liver disease, of arterio-sclerosis, scurvy and hæmophilia. It frequently accompanies endometritis, subinvolution, salpingitis and ovaritis, fibromyoma and fibroid polypus, and malignant disease of the uterus. It is sometimes produced by sexual excesses and very occasionally may appear to be an idiopathic condition.

Metrorrhagia is always suspicious of malignant uterine disease. It may, however, be due to mucous or fibroid polypi, to ectopic gestation or to local injury or ulceration.

Dysmenorrhœa may be caused by defective development of the uterus, or by various malformations, or by abnormal flexions and versions. Pelvic inflammation may act by congesting the internal sexual organs, constricting and distorting them and fixing them in abnormal positions by extensive adhesions. Fibroid tumours and polypi, heart, kidney and liver disease and exposure to cold and wet are other causes. Membranous dysmenorrhœa is associated with the discharge of a typical membrane which may actually form a complete cast of the uterus or be passed in shreds. The cause is disputed, but is probably developmental in origin; it is often productive of sterility, but may be cured if conception occurs.

The effect of these various abnormalities of menstruation upon the sexual life of woman naturally depends almost entirely upon the exciting cause. Generally speaking, however,

they all tend to produce a certain amount of sexual debility. Anæmic girls and women suffering from amenorrhœa are lacking in vitality, easily fatigued, often depressed and melancholic, frequently dyspeptic and constipated; their sexual inclinations are irregular and perversions not uncommon. Hæmatokolpos may result in the entire destruction of all the internal sexual organs and the consequent unsexing of the victim. Temporary amenorrhœa due to cold, shock, etc., may have no sexual influence. Heart, kidney and liver diseases cause general debility in which the sexual organs participate. Early stages of phthisis occasionally appear to be accompanied by increased sexual desires, but with the progress of the disease these gradually disappear altogether.

Menorrhagia if severe debilitates the patient by actual loss of blood; thus submucous fibroids may render her intensely anæmic, blanched to the point of waxiness and scarcely perceptible pulse, incapable of the least exertion, breathless and collapsed. Considerable recovery may take place before the next severe hæmorrhage occurs, but at no time is there much chance of strong sexual feelings being aroused. Salpingitis and ovaritis produce pelvic pain and distress and prohibit coitus. Menorrhagia due to sexual excesses explains its own position. Malignant disease has already been referred to.

Dysmenorrhœa is usually met with in unmarried women or nulliparous wives, and is often accompanied by deficient sexual feelings; but this is not always the case, and I have seen the exact opposite in quite a fair number of instances. When the condition is well marked the patient is quite unable to perform her usual duties and may be compelled to go to bed during the height of the pain. If engaged in business the inconvenience of having to neglect her occupation for two or three days every month may lead to the loss of her situation. If not in business the constantly recurring attacks of indisposition may still give rise to comment amongst unsophisticated friends. In all cases there is a tendency for the girl to become distressed about her condition and to suffer from depression of spirits or melancholia. Habits of drug-taking and alcoholism are not infrequently developed as a result of desperate attempts on the patient's part to avoid staying away from

business or to obviate the cancelling of social engagements. I have personally noted many cases amongst members of the theatrical profession where morphia and cocaine habits have been acquired solely as a consequence of dysmenorrhœa. It is easy to understand that a stage-dancer or a theatrical star faced with the necessity for carrying on night after night will unhesitatingly adopt any expedient, however dangerous, sooner than lose her place or spoil her reputation. Every effort is therefore required to combat this most distressing disorder, which is admittedly difficult to treat, especially if of the membranous type. Alcohol, opium, heroin, cocaine and such-like drugs must never be prescribed; but bromides, phenazone, acetanilide, purgatives, hot sitz-baths, mustard poultices, and good hygiene are all of service. Very often rest in bed is absolutely essential and must be insisted upon, regardless of consequences. Operative treatment in the way of dilatation of the cervix and curettage of the endometrium of the uterus does good in a certain number of cases. Marriage and pregnancy often cure the trouble when everything else has failed, but this happy result is not always obtained, and a guarded prognosis must be given if the physician's advice regarding marriage is sought. In desperate cases where the pain is so severe as to render life a misery, the question of removal of the uterus and adnexa may have to be considered.

CHAPTER XI

THE EFFECTS OF VENEREAL INFECTION

THE subject of venereal disease is naturally a vast one, but in the present work we are only concerned with its effects upon the sexual life of women and with a brief study of its prophylaxis and treatment.

We recognise three forms of venereal disease—gonorrhœa, chancroid, and syphilis.

Gonorrhœa is characterised at its onset by a thick yellow discharge from the vagina, by frequent and painful micturition, and by a feeling of weight and tenderness in the lower parts of the pelvis, together with a certain amount of aching in the back and loins. These symptoms come on a few days after infection has taken place, but in some cases they may be so slight as to escape special notice, the patient regarding them merely as evidence of a chill or exposure to cold. More often the symptoms are acute and the patient is unable to get about owing to swelling and inflammation of the vulva and vagina caused by the irritation of the discharge. On examination, the affected parts are then seen to be red and swollen, thick yellow matter is noticed oozing from the vagina and covering the labia, and a spot of pus can usually be expressed from the orifice of the urethra. A smear of the discharge, stained and inspected under the microscope, will reveal the presence of gonococci. Methylene blue is probably the best stain to employ. In uncertain cases a culture may be made by Wertheim's method, on plates, with a mixture of liquid agar and blood serum. Definite colonies of the gonococci should be found within twenty-four hours.

If the disease is not immediately treated, the glands of Bartholin are usually infected, swell up and become acutely painful. The inflammation may then spread upwards and attack the lining membranes of the uterus and Fallopian tubes, producing

endometritis and salpingitis, whilst pyosalpinx and hydrosalpinx are common. The ovaries may also be attacked and become the seat of abscess formation. Tubo-ovarian inflammation and abscess is a frequent complication, the disease affecting both tube and ovary simultaneously. Sometimes the inflammation does not proceed to the formation of pus but slowly resolves, and the affected parts may then completely recover. In severe cases both tubes are acutely inflamed, their orifices sealed up and their cavities distended to form bags of pus, which may either burst and infect the surrounding peritoneum or become encapsuled with inflammatory tissue. In both cases the patient is rendered sterile, even if her life is spared.

The sterility is due either to the impossibility of spermatozoa and ovum meeting, or to impossibility of an oöcyte getting into the uterus, or the impossibility of any ova surviving the disease. Thus, sterility from tubo-ovarian inflammation may be caused by (1) the impermeability of the Fallopian tubes, (2) the encapsuling of the ovaries with inflammatory exudate which effectually prevents the exit of an ovum, or (3) the total destruction of tubes and ovaries by their conversion into abscesses.

If the Fallopian tubes are not entirely closed by the inflammation, they may be rendered functionally useless (1) by the destruction of their lining membrane of ciliated epithelium; (2) by distortion in shape and such irregular formation of their mucous folds that an unpregnated ovum is detained in the lumen and an ectopic pregnancy results; or (3) by so much irritation and disease of their mucous membrane that the inflammatory products kill the oöcyte which has formed and is attempting to find its way to the uterus.

Again, where gonorrhœal endometritis is present, even if the tubes and ovaries are apparently unaffected and an oöcyte can pass into the uterine cavity, no pregnancy results, since the diseased uterine mucosa is totally unsuitable for the implantation and development of the fertilised ovum.

Moreover, even when the ovaries, tubes and uterus are not appreciably diseased and the woman's gonorrhœa is more or less latent, the chances of impregnation are much diminished,

since the vaginal secretions, being unhealthy, are particularly liable to destroy the vitality of any spermatozoa deposited therein. Further, if these escape and succeed in fertilising an ovum with the production of pregnancy, the woman runs a strong risk of severe puerperal infection after childbirth, and may become permanently sterile in consequence—a condition of so-called " one child sterility," following, for example, a first confinement.

Apart from the production of sterility, gonorrhœal disease may cause so much pelvic inflammation that the tubes and ovaries become glued down by a mass of adhesions in the pouch of Douglas. In this situation an inflamed and tender ovary gives rise to intense pain when pressed upon in the act of coitus—which indeed may be rendered unsupportable. Dyschesia and dysuria may also result, and the woman's condition is rendered miserable in the extreme. Relief by operation and removal of the diseased organs then becomes imperative.

In estimating the average results of gonorrhœal infection in the female as recorded by a large number of observers, one is forced to come to a very depressing conclusion. A large number of infected women remain sterile ever afterwards; those who conceive rarely have more than one child; many suffer from chronic pelvic disease and either become permanent invalids or have to submit to operation to effect a cure; unhappiness in married life is almost universal. Nöggerath gives the following figures, which, although considered as exaggerated by other observers, have still a certain value. Of 80 women who were infected, 49 were rendered absolutely sterile; 31 became pregnant; 23 were delivered at full time; 8 had miscarriages. Of the 23 delivered at full time, only 1 had four children, 3 had three children, 7 had two children, 12 had no more than one child each. Since four children is considered the normal average, it would appear that only one woman out of the eighty who were infected remained absolutely unaffected by the malady.

As Nöggerath's results did not take into account the state of the husband's health or make allowances for varying marital conditions, there is no doubt that the conclusions he drew

therefrom were too sweeping. Also, as he wrote in 1872, when the treatment of gonorrhœa had not advanced to its present state, further allowances would have to be made for defective methods of combating the disease. But even to-day the misery and distress caused by this malady are such that a very large proportion of the cases treated in women's hospitals can be directly or indirectly traced to it. Giving some of my own figures, out of 100 cases operated on for disease of the tubes and ovaries, 42 gave a history of gonococcal infection. Out of 100 cases of sterility in women patients, 37 had undoubtedly suffered from gonorrhœa. Out of 100 cases of women who had previously contracted the disease and received a certain amount of treatment, 83 complained of pelvic trouble afterwards. Out of 100 cases of married men suffering from gonorrhœa, 62 infected their wives. Out of 100 cases of married women who were infected by other men, 47 infected their husbands. Out of 1000 cases of gonorrhœa in women, only 207 carried out the directions given them for home treatment; 326 stopped attending the clinic after the first month and apparently neglected themselves altogether; the remainder attended irregularly with very unsatisfactory results. Out of the thousand patients not more than 256 were definitely cured.

In most cases one finds that there is a good deal of alarm and mental distress at the onset of the disease, but these soon wear off, and once the acute symptoms have subsided the woman considers that the danger has passed and speedily loses interest in her treatment. She judges by what she sees in the way of discharge and by what she feels in the way of pain or discomfort. If these amount to practically nothing, she considers that further treatment is superfluous, and argument is generally wasted upon her. If she is prevailed upon to continue treatment, she does so for a time and then the mental impression which has been made upon her wears off and she again neglects herself. These unfinished cures are very fertile causes of the spreading of gonorrhœa amongst the community at large. Nearly all the gonorrhœa in the world is spread by women, who, if questioned, would say—and sometimes in good faith—that they were not suffering from any venereal disease at all and never had done so. These

supposedly clean women act as hotbeds for the rapid dissemination of disease. So strenuously do they deny infection that they frequently convince the male victim that he must have acquired the malady elsewhere. Let the discharge be examined microscopically and the truth is laid bare at once. Women who have acquired gonorrhœa innocently from their husbands often remain in complete ignorance of what they have actually suffered from, and since they are nearly always imperfectly treated a considerable proportion become chronic invalids.

In dealing with infection of the male from latent gonorrhœa in the woman it is important to remember that he may escape altogether if there has been but a single brief coitus, whereas if this be prolonged or repeated several times in quick succession he is almost invariably infected, probably due to the fact that hidden germs are only brought to the surface by prolonged stimulation. The same explanation applies to cases where two men have had connection with the same woman within a short time of each other, when the first man may escape and the second one be infected.

The prophylaxis of gonorrhœa in the female demands the wearing of an efficient condom by the male, or washing, irrigation and distension of the vulva, vagina and urethra with a strong solution of permanganate of potash immediately after intercourse. Since condoms are unreliable and frequently burst during coitus, and since proper irrigation of the vagina is practically never carried out, it is obvious that efficient prophylaxis is but rarely effected.

The immediate treatment of gonorrhœa can only be given by an expert. Copious irrigations with a solution of permanganate of potassium 1–1000 must be made; or protargol 1 per cent., or argyrol 15 per cent., swabbed into all parts of the vulva and vagina repeatedly and efficiently. The external os uteri must also be thoroughly treated with protargol or argyrol on swabs, and the urethra irrigated with 1–500 protargol solution. Vaginal douching with biniodide of mercury may also be used, and ballooning of the vagina with the antiseptic is an advantage. Packing with protargol tampons is sometimes employed. Whatever process is adopted should be repeated twice daily for a week, and then further irrigation

with permanganate continued for several days more (strength 1–5000). Frequent hot sitz-baths are very useful to relieve pain.

Chancroid is a soft infected sore which is usually found on some part of the external genitals and is frequently multiple. It begins two or three days after the impure connection and rapidly enlarges. A good deal of pain and swelling of the parts with a purulent discharge are noticed and the nearest superficial glands become enlarged and tender (buboes). The bubo may break down and ulcerate, causing great pain and distress. Chancroid does not infect the system but is a purely local disease. Its causative agent is Ducrey's bacillus, which is Gram-negative, about $2 \times 0{\cdot}5\mu$ in size, with rounded ends and occurring in chains of from five to twenty bacilli. Infection is prevented if the man wears a condom or if the vulva is well smeared with a 30 per cent. calomel ointment directly after coitus. Immediate treatment of the sore is by applying fuming nitric acid, or by cleansing with pure ether and then rubbing in a solution of arsenate of soda in alcohol (1–50). Buboes if present will require special attention and are often more troublesome and painful than the soft sore itself. Occasionally the chancroid spreads very rapidly and may induce phagedena with horrible ulceration and sloughing. Not infrequently chancroid is complicated with syphilis, which appears two or three weeks later. Chancroid is never the cause of infection of the uterus or its adnexa: it has no effect upon fertility. From its painful nature, the tendency to produce buboes and its obvious connection with recent sexual intercourse, it is a fruitful cause of much domestic infelicity.

Syphilis first exhibits itself as a small hard pimple on the external genitals three or four weeks after infection. It slowly increases in size, but does not secrete much matter and is not painful. The inguinal glands usually enlarge, but are not painful and do not tend to suppurate or form abscesses. The hard chancre is, moreover, generally single. When within the vulva it may sometimes cause so little trouble as to escape notice altogether. The infecting agent is the spirochæte pallida, a virulent organism which speedily finds its way into the system and poisons every part of the body, producing

secondary symptoms after the course of a few weeks, and tertiaries up to twenty or thirty years afterwards. Secondary syphilis is characterised by skin rashes, sore throat and falling of the hair. Tertiary symptoms are due to the formation of gummy growths, or "gummata," in the skin, bones, or any of the internal organs. In late stages such complications as locomotor ataxy, general paralysis of the insane, and various forms of brain, spinal cord and nerve diseases may develop. The disease unless absolutely cured is frequently transmitted to the children, who are then said to suffer from congenital syphilis.

The prophylaxis demands the use of a condom by the male and the application of 30 per cent. calomel ointment all over the external genitals both before and after coitus.

The immediate treatment consists in the intravenous injection of salvarsan or one of its substitutes plus intramuscular injections of mercury. Ten injections of salvarsan and five of mercury constitute a good immediate course, which, however, may need repeating if the Wassermann test is not fully positive after the fifteen injections have been completed. The injections are best followed in all cases by twelve months' treatment with mercury and iodide of potassium in the form of pills or mixtures. Wassermann tests should be made every three months for two years and the patient kept under regular observation. Local treatment of the hard sore is by means of lotio nigra and a dusting powder of calomel, zinc and starch. A chancre on the cervix uteri is admirably healed by the application of unguentum hydrargyri on the top of an efficient vaginal tampon of cotton wool.

Syphilis, unless treated efficiently and carefully in the earliest stages, hopelessly damages a woman. It is the tertiary developments which are most serious in their results, and out of 5000 cases which I have collected from various sources, 1500 were affected with tertiarism in one or other of its multitudinous forms. Even in spite of the most modern methods of treatment many women are uncured principally because they will not submit to the full course of injections and after-treatment. Once the sore has vanished and skin-rashes and sore throat, etc., have disappeared, the woman is convinced that

she is cured and that further treatment is unnecessary. For a time all goes well and then evidence of deep-seated disease makes itself prominent. Gummata form and the internal organs are seriously damaged in consequence. Destruction of bone, disease of the arteries, damage to the sexual organs, iritis, sudden deafness, nephritis, severe jaundice, ulcerating lesions of the skin with the production of horrible disfigurement, and syphilis of the nervous system are common results. From a careful study of syphilis in women I have estimated that 75 per cent. of infected females are immoral and 25 per cent. have been infected by their husbands.

As a cause of married unhappiness syphilis is a most important factor. The serious nature of the disease, its general recognition as a disquieting and shameful malady associated with prostitution, debauch and infamy, the destruction of child life or the transmission of hereditary disease, and the ruin of the whole family by incapacity, disease and death—have naturally most distressing results both from a social and sexual aspect.

The serious nature of the disease is patent enough. Syphilis causes abortion and miscarriage more frequently than all other conditions put together: 75 per cent. of children born to uncured mothers die from the effects of the disease which has been transmitted to them. Syphilis tends to cause the following deformities and defects in the children: monstrosity, dwarfism, deformed hands and feet, spina bifida and scoliosis, cleft-palate, club-foot, deaf-mutism, heart-disease, ectopia vesicæ, abnormalities and malformations of the sexual organs, rickets, and mental defects such as idiocy, simple-mindedness, epilepsy, and degenerate tendencies. The typical syphilitic infant is puny and wizened-looking, its skin like that of a very old man and its muscles so weak that it can scarcely suck or cry. If it survives it is always delicate and ailing, has a peculiar old appearance with an earthy complexion, is liable to die off from very trifling complaints and always seems on the borderland of "decline." On examination, the unfortunate infant or young child will usually exhibit definite evidence of its hereditary disease in the shape of general deformities and abnormalities, "Hutchinson's teeth" and other dental

defects, extreme arching of the palate, cleft-palate, flattened bridge of the nose, cranial bosses and irregularities, iritis with the production of "salmon patches," nasal disease, gastro-intestinal troubles, and so on.

Syphilis may pass to the third generation. I have personally seen several very marked instances of this and have come to the conclusion that the condition is frequently overlooked. It is evidenced by one or other of the following dystrophies: saddle nose, high palate, hare-lip, umbilical disease and rupture, cranial bosses, hydrocephalus, cryptorchidism (undescended testicles), syndactylism (fused fingers and toes), strabismus, rickets, spina bifida and scoliosis, infantilism and retarded growth, congenital debility, acrocyanosis (blueness of extremities), epilepsy, mental deficiency and idiocy. Out of 100 pregnancies in which either wife or husband was the subject of hereditary syphilis I have noted a mortality of 50 per cent. in the children.

Syphilis is not becoming a less serious disease by the advent of new methods of treatment; indeed I fear that the tendency is rather in the opposite direction, and for this reason, that the amount of treatment advised is being diminished, especially as regards mercury, a drug which I still regard as absolutely essential for the cure of this complaint. It has certainly seemed to me that, of late, too much reliance has been placed on salvarsan, the use of mercury being considered rather a secondary affair. I have not found this good practice, since many cases relapse in after years, showing that the "cure" has not been effective.

The women most frequently afflicted with syphilis in this country may be classed in the following order: first, ordinary prostitutes; then barmaids and girls connected with the stage; next hotel attendants and waitresses; then middle-class girls holding such positions as shop-assistants and typists; then factory operatives, maid-servants and the poorer classes generally; least often the well-educated and upper classes.

It is practically impossible to give reliable figures showing the percentages of infection in these various classes. Different authorities give such widely different results of their calculations that one scarcely knows what value to place upon them.

It must be remembered that the prevalence of syphilis is vastly greater in certain areas than in others; that the capital cities of all countries are more or less hotbeds of the disease at all times; that the Great War has produced a certain increase of syphilis everywhere; that many badly-paid employees in large emporiums and factories are driven by poverty to eke out a precarious existence by secret prostitution, and ought therefore to be included in the general class of prostitutes, although one is disinclined to do so; and, finally, that whilst syphilis is no respecter of persons, the disease is much more easily concealed by well-to-do women than by those in poor circumstances. From a careful consideration of these various points it will be easily understood that statistics relating to the incidence of syphilis in the various classes of society are not only difficult to compile but are often quite unreliable.

Prostitution, either open or secret, undoubtedly tends to spread venereal disease in all its three forms, and no matter how effectively we treat our patients afflicted with gonorrhœa, chancroid, or syphilis, we shall never completely eradicate these diseases until every prostitute is freed from them also. What is the use of free clinics, free remedies, free advice, when one prostitute can directly or indirectly infect thousands of men and women in the course of a single year? We cannot cope with the magnitude of such dissemination. But if we can capture and cure the prostitute (whether she be a professional or amateur), then our free clinics will work wonders. The trouble is that we cannot, in the present state of our laws, compel prostitutes to be treated. Many continental countries have made attempts to get their loose women under control. Brothels have been registered and the women compelled to submit to regular medical examination. But the very existence of such houses encourages prostitution and the traffic in girls, and the medical inspection is generally perfunctory. Also, since venereal disease may be actually present and yet in so early a stage that diagnosis is impossible, it may be spread in a wholesale manner before the woman is isolated. But the main defect of the system is that it only deals with recognised prostitutes, whereas it is well known that after all only a very small proportion of men actually visit such women,

the majority preferring to find someone who will infuse a less mercenary element into her love affairs, or at least one who is free from the control of a brothel-keeper. And it is exactly this amateur class that is the most dangerous, since it is the least suspected and the least often properly treated for disease, even though the actual incidence of that disease be somewhat less there than amongst the professionals.

CHAPTER XII

IMMORALITY, FREE LOVE, AND PROSTITUTION

It is probable that on the whole women lead more moral lives than men. Yet a certain proportion of women must be immoral, since the men must have partners in their immorality. What this proportion amounts to is an extremely difficult matter to ascertain; indeed, nothing more than the roughest estimate is practicable, unless a very limited number of people are under consideration. In large towns it is probable that the percentage of women who have lived more or less " easy " lives from a strictly moral point of view is considerable; in tiny villages it is probably very small. The reason for this difference lies in the fact that open immorality is always rare, and secret immorality is a difficult matter amongst a small community where everyone is known and the actions of every member are under close observation. In big cities, on the other hand, it is quite possible for a girl to lead an immoral existence without detection.

There is, however, no doubt that the average woman has no wish to be immoral. She desires to marry and would much prefer a husband to a lover. The trouble lies in the fact that she is frequently unable to obtain a husband, but may easily secure a lover. If the latter makes himself sufficiently attractive from a sexual point of view, she may succumb to the temptation and become his mistress. Or if she be a woman of strong sexual passions and careless of consequences she may give herself to several men who all attract her. Sometimes it is not sexual desire, but merely a passion for pleasure and a so-called " good time," that induces her to go astray, and there is indubitably a large number of girls who are utterly unable to resist the fascination of constant amusement and the attentions of the male sex. Once launched on the sea of worldly pleasure they make little or no attempt to steer a

straight course, but allow themselves to be borne hither and thither as the waves of sensuality and desire carry them.

There are, of course, many women who form deep attachments for their male companions, love them passionately and devotedly, and only yield to their advances from the purest and most disinterested motives. Possibly the majority think that in the end their lovers will marry them and that their present condition is only a temporary one for which they will be recompensed in the fullness of time. Some, however, having formed an attachment soon realise that there is little or no hope of marriage, but yet cannot bring themselves to sever their intimacy with the loved one and are content to live in the happiness of the moment with no thought for what the future may bring. Such women have nothing of the prostitute in their natures; they are faithful and long-suffering, and their sexual relationships are often on a much higher plane than is found amongst many who have contracted a legitimate union.

Yet all these classes of women are regarded by the world as immoral; society will have nothing to do with them and refuses to differentiate between the worst and the best. In the eyes of modern civilisation they are all outcasts, all morally unclean, all persons to be avoided or shunned. The broad-minded man or woman does not adopt this attitude and is prepared to discriminate between the woman who sells her body without love, and she who gives all she has for love. But broad-minded individuals being certainly the exception, the woman who accepts extra-conjugal love is never considered as "respectable" by the world generally.

It is true that certain women and men of "advanced" views have from time to time agreed to disregard the marriage service and its restrictions and to live together as man and wife without curtailing their individual privileges. These "free marriages of conscience," although furnishing much food for thought and for the writings of romanticists, have usually proved a failure. The couple may be deeply in love with each other, individual freedom may be complete, children may be provided for and their future assured, no element of jealousy or unfaithfulness may creep in, perfect health and strength

may be maintained—but after the flight of time the irregular union is given up. The influence of public opinion is too strong; it cannot be disregarded with impunity; neither royalty nor street-sweeper is permitted to adopt free love without condemnation following; and these facts have to be faced by those who decry conventional marriage or who uphold the suggestion of " experimental unions " before actual complying with legal formalities.

No doubt marriage is often a failure; no doubt the divorce laws are such that they demand the most searching and drastic amendment; no doubt the present numerical excess of women over men compels a certain number to remain single; no doubt there are many men who have not the means to support a wife, much less a family; no doubt there are persons of both sexes who are physically and mentally unfit to marry; no doubt also there are many for whom sexual continence is a physical impossibility—but all these indisputable facts will not alter the present views of the mass of the people of this country and of most civilised countries. Immorality on the part of the man, if not too publicly vaunted, may be to a certain extent glossed over and excused, but in the woman it is never pardoned. And to a large extent we must agree that society is right in adopting this attitude. It is the price that must of necessity be paid for the advantages of modern civilisation.

Amongst primitive races morality is judged from an entirely different standpoint. The Buryats of Siberia permit unrestricted sexual intercourse between the men and girls before marriage, especially at certain festival seasons. There is then much dancing and feasting in the evenings, and couples leave the bonfires around which the dances take place and retire to sheltered spots where intercourse takes place under the cover of darkness. The girls repeat the act with different partners. These people do not consider such promiscuity as immoral. What would it be considered in this country?

It is recorded by explorers that in Thibet the men consider a woman most suitable for marriage after she has had sexual intercourse with many lovers.

Amongst certain tribes in Australia at the present time group marriages are the custom. A group of men of one tribe

marry *en bloc* an equal group of women of another tribe. No man has a particular woman as his wife, but may use any of the number allocated to his group.

In ancient Britain the men had a number of wives in common, and fathers, sons and brothers might all cohabit with the same woman.

Again, at the present day, we find in Africa and in north-eastern Asia abundant evidence of sexual promiscuity, and also of wife-lending and wife-exchange. As regards children, these belong in most cases entirely to the mother and to the mother's tribe.

From these few examples it will be seen that conceptions of morality differ widely amongst different people and also amongst the same people at different periods of history. But we are not here concerned with these differences of custom and ideas. We are concerned only with the views of the present day in our own country and in those countries where similar social laws and customs prevail. The modern Christian world condemns all sexual intercourse except that between persons united together in the bonds of holy wedlock. The Law demands, further, that this holy wedlock, if not sanctioned by the proceedings of a ceremony conducted by a minister of an approved Church, must be registered by a civil functionary, and refuses to recognise unions not so sanctioned or registered.

Let us now consider what usually happens to those women who contract irregular unions. How is their happiness affected and what are the results upon the minds and bodies? We can answer the question, unfortunately perhaps, only in one way. The results are almost invariably deplorable and disastrous.

As regards happiness, a brief spell of it may be experienced, only to be followed in most cases by acute misery and suffering. Many celebrated writers of fiction have endeavoured to throw a halo of romance over the doings of a Bohemian world, but very few have been able to avoid a pathetic ending to their tale. In real life the inevitable conclusion seems to be that the woman pays. Mostly she is deserted by her lover, and either sinks lower and lower into the mire or comes to an untimely end. Sometimes the stimulus of having a child to provide for

may prove her salvation, and she may surmount all obstacles and lead thereafter an honourable and useful life. Sometimes, also, her lover may not desert her, but, on the other hand, afford her every assistance, and without giving her the full status of a married woman, protect her and provide for the future of any child or children. Beyond minor inconveniences she is then no worse off than many legally married women in her own position in life. Still, even in these cases if the girl is of a sensitive nature, the knowledge that she is not legally married, added to the fact that her relatives and friends usually get to know of her irregular union and look down upon her in consequence, tend to make her neurotic and irritable. She becomes despondent or is subject to alternate attacks of gaiety and depression. Her nervous system suffers in consequence, her digestion is affected, she resorts to alcohol or drugs, hysteria may develop, and her general health and vitality are lowered. The ultimate result depends so largely upon attendant circumstances that until it is attained the matter is one of speculation only. The uncertainty concerning the future naturally makes pregnancy and childbirth unduly trying and sometimes dangerous. The care of a family is frequently too much for her strength as well as for her nerves. The children are often neglected and consequently delicate. Home-life is shorn of many of its pleasures. Quarrels are frequent and domestic happiness is rare. If the man is unfaithful, ungovernable jealousy or violent hatred is likely to follow, and the possiblity of venereal infection has also to be considered.

Artificial abortion is common amongst unmarried women and dangerous complications are then very prone to arise. A woman to whom the birth of a child would mean the loss of her work, and possibly the loss of her home also, is not likely to stop at anything which she thinks may rid her of the shame and disgrace of pregnancy. She is usually quite willing to risk her health or even her life in the attempt. The most horrible methods are adopted without hesitation: knitting-needles and bonnet-pins have been thrust into the uterus without any regard for the position of the cervix; scissors, skewers and forks have been similarly used. One desperate woman is recorded to have fired a revolver into her vagina;

another stabbed herself in the abdomen; another partly eviscerated herself with a razor; another dragged her uterus nearly out of her body with a sharp hook; another deliberately directed a current of steam from a large steampipe into her vagina; another applied vitriol to her cervix uteri; another introduced a spike into the vagina and then pushed all her body-weight against it—and so on; whilst the taking of all kinds of poisonous drugs and chemicals from which death not infrequently occurs is quite an everyday experience.

In the event of an abortion taking place and the woman surviving, there is always the possibility of some pelvic disease following as a direct result. After repeated abortions, or attempts at abortion, this possibility becomes practically a certainty, and pelvic peritonitis and cellulitis, endometritis, salpingitis and ovaritis often develop. These conditions are frequently neglected if they are not very severe, and so chronic pelvic disease amongst unmarried mothers is naturally rather common. Unhappy, unsettled and highly strung women are always apt to neglect their physical ailments, partly because they are indifferent to what happens to them, and partly because they dread that medical care and attention will in some way make their irregular life more widely known. Since a fair proportion of women in such circumstances take to alcohol to alleviate their sufferings, it is not to be wondered at that the proportion of dypsomaniacs amongst them is high.

Where there is no hope of a permanent home, or a certain amount of love and protection, the woman of course suffers much more acutely than if she leads a " sheltered " life.

Where the girl gives herself, even with a certain amount of discrimination, to several lovers she can only be classed as a prostitute by natural inclination. Although such women may not actually offer their bodies for sale in the public streets, they sell themselves for pleasure and passion without the redeeming feature of love ever entering into the question. The distinction between the professional and the natural prostitute is merely a question of money first in the one case and passion first in the other.

Women who voluntarily adopt prostitution as a profession do so from a variety of motives, amongst which weak-minded-

ness, an inordinate love of pleasure and excitement, a disinclination for the drudgery of workshop and factory life or for the monotony of domestic routine, and the force of bad example are very commonly noticed. Sexual passion is not generally very pronounced, and as a matter of fact it is rare to find a regular prostitute who exhibits intense feeling during the performance of coitus.

The voluntary adoption of prostitution is, however, not nearly as common a circumstance as what might be termed forced prostitution, where the individual having transgressed the laws of society finds herself practically faced with either starvation or immorality.

The origin and history of prostitution has been very thoroughly investigated by many writers, especially Sanger, and a brief account of it may be given here as throwing light upon a very prolific cause of sexual debility. Prostitution is so old a vice that it might almost be said to have existed from the beginning of the world, and indeed there are those who assert that the Garden of Eden was not free from this trouble. Prostitution was certainly common amongst the Jews two thousand years before Christ. In the Bible we find frequent references to it: thus, the incident referred to in Gen. XXXVIII, where Judah mistook his daughter-in-law, Tamar, for a harlot and had intercourse with her, paying for his pleasure with a kid, proves that in those days the practice was common enough. Moses laid down a long list of laws against whoredom, and punished adultery and rape with death. Yet he took an Ethiopian concubine to himself and permitted foreign prostitutes to establish themselves in Israel. As a natural result these women adopted the most shameless methods to attract the youths of the country, and openly exhibited their naked charms in every posture of invitation. As a further result the worship of Moloch, Baal, or Belphegor was introduced, and with sacrifices and mystical rites prostitution was stimulated to such a degree that unlimited sexual orgies took place in the cool groves which surrounded the temples, and women were found prostituting themselves by the roadside without attempt at concealment.

In ancient Egypt, many writers have considered that

sensuality was always a prominent feature of the country. The rites of Isis and Osiris were noted for their sensual suggestiveness. Lascivious dances with erotic gesticulations were invariably indulged in at times of festivals, and the temples of the deities were nothing more than brothels on a magnified and magnificent scale. Some of the prostitutes prospered exceedingly in their profession and obtained reputation throughout Europe. Of one Thracian courtesan it is related that she built a pyramid out of her earnings !

The women of Babylon were reported to have been obliged to prostitute themselves once in their lives in the temple of Mylitta. Young men were always present in the temple grounds ready to take their fill of pleasure from the girls and women who came to carry out this extraordinary penance. At Babylonian banquets the most depraved practices were indulged in between the men and women who frequented them.

Phœnician girls of good family were frequently given up for sexual purposes to foreign merchants who visited the country to do trade. What presents the girls received were supposed to be given to the Love goddess, who in Phœnicia was known as Astarte. More often rich presents were kept by the girls, the goddess having to be satisfied with something less costly. A similar state of things appears to have prevailed at Carthage and in Syria, where Astarte was also worshipped. The Lydians adopted like practices, and festivals at which the girls and women were present in large numbers were marked by indiscriminate sexual intercourse following upon an orgy of wine-drinking and lascivious dances in honour of their goddess, who was named Mithra, but was actually the same goddess as the Astarte of the Carthaginians and Phœnicians and the Mylitta of the Chaldeans. Mithra, Astarte and Mylitta were therefore simply different names for Venus, the goddess of Love.

In Grecian history of an early period the Draconian code prescribed the penalty of death for rape, adultery and fornication. Later, prostitution was permitted and brothels were established at Athens. The profits from these public institutions were utilised to lessen taxation and to erect temples to Venus. The prostitutes were, however, not treated as women worthy

of much consideration. They were not allowed to mix with Athenian matrons and had to wear a special costume when they appeared in the streets. They were forbidden to enter the temples, had no civil rights, and their children were barred from mixing with others or inheriting property or attaining any legal status in society. As time went on many of these severe regulations were relaxed and the prostitutes permitted a certain amount of freedom. In Corinth and Sparta, unfortunately, this freedom was extended to such a degree that prostitution became a public scandal and was openly flaunted in the streets. As a result the Athenians, fearing the growing power of these women, again put into force the Draconian laws as modified by Solon. A second relaxation followed when Hyperides the orator defended the celebrated courtesan Phryne, who was accused of some very mild offences against the State. Hyperides won his case by an impassioned speech which he supplemented by exposing the wonderful beauty of Phryne to the eyes of the judges. She was released, and thereafter the prostitutes of the city flourished exceedingly

Various classes were recognised, the highest being the Hetairæ, or kept women, who attained such a position in society that they exercised immense influence over the rulers of the State. The lowest class comprised the Dicteriades, who at first were only permitted to live at Piræus, the sea-port of Athens. They preyed upon sailors and dissolute persons passing from the port to the city, and resembled women who at the present time haunt the quays of our own seaports. They had for accommodation certain houses known as Dicteria, which were under the control of the police, and where they exposed their charms in a state of complete nudity for a small fee. Many of these women were specially trained to perform certain acts which would excite the sensuality of their clients, and were adepts at the most disgusting practices.

An intermediate class were known as Auletrides, or flute-players. They played and also danced, and employed their art in a method best calculated to stimulate the sexual passions of their audience—passions which they afterwards satisfied in the most lascivious fashion. At the festival of Venus Peribasia, all the most proficient flute-players were accustomed to take

part, and competitions known as the Callipygian Games were organised, in which the women not only played and danced but gave exhibitions of their sexual charms in a manner which left nothing to the imagination. As men were not usually admitted to the festival, there appears to be no doubt that Lesbianism and other perversions entered largely into the proceedings. One very celebrated flute-player, known as Lamia, was the favourite of King Ptolemy of Alexandria, and afterwards became the mistress of the Macedonian Demetrius, who captured the city. She exercised great sway over Demetrius and practically ruled his court. The Athenians built a temple in her honour and gave her the name of Venus Lamia. Although deified she was known to have been addicted to the most scandalous sexual practices.

A fourth class—the Concubines—were really slaves held by rich married men with the knowledge and consent of their wives. They were used by the husbands for purposes of sexual intercourse and by the wives for waiting upon them and carrying out perverted acts of sensuality.

It is well known that amongst the higher classes of the Grecian prostitutes there were to be found many who possessed remarkable intellectual qualities. Since they alone amongst women were permitted to see the performances of plays, to visit the studios of famous artists and sculptors, to listen to celebrated orators and to discuss politics with the most advanced intellectuals of their time, it is easy to understand how they scored off the secluded if respectable wives and daughters of even the highest Athenians. Further, the worship of Venus, to which the prostitutes were devoted, attained a very high position in the cities of ancient Greece. Solon himself built a great temple to Venus Pandemos right opposite his dicterion for public prostitutes. Many other temples were then erected, amongst which those of the Venus of brothels, the Venus of indecency, the Venus of darkness, the Venus of street prostitutes, the Venus of Lesbian love, and the Venus Callipyge, have all been mentioned in history. The Greeks worshipped in these temples, sacrificed to these deities, and regarded them as sacred and honourable.

Under such conditions it is not impossible to understand how

a Milesian courtesan, Thargelia, was employed by Xerxes to negotiate with the court of Thessaly and eventually married its reigning sovereign; how another Milesian prostitute named Aspasia delivered public lectures on philosophy, and included amongst her patrons such famous men as Socrates, Alcibiades and Pericles, whilst her physical beauty was so great as to turn the heads of all who saw her, and her political influence so powerful as to produce war against Samos and Megara; how the Athenian voluptuary Hipparchia, mistress of the cynic Crates, became one of the most esteemed women authors of her day; how Bacchis, a beautiful kept-woman of Athens, received at her demise one of the most eloquent orations recorded in the literature of Greece; and how Gnathea, another Athenian, was so renowned for her wit and elocution that many of her sayings passed into proverbs and were recorded by the famous writers of the period. For similar reasons the celebrated courtesan Lais gathered around her at Corinth some of the most celebrated personages of that city. She was born in Sicily and sold as a slave to the painter Apelles, who was struck by her marvellous beauty and grace of carriage. He trained her in his own home and finally freed her and started her on her career of fame. Demosthenes, Diogenes, Aristippus and many other men of rank and fortune in the Corinthian city lay at her feet, and she achieved international notoriety and amassed a huge fortune. She spent her money so lavishly, however, that in the end she died in poverty and misery. Phryne, another kept-woman, who was a great favourite with the people of Athens and has already been mentioned, became so wealthy as a result of her personal charms that she was able to offer sufficient money to rebuild the destroyed city of Thebes. Her marvellous beauty was depicted by both Apelles and Praxiteles, the most famous painter and sculptor respectively, of the period. Of Phryne it is related that she used to take the chief part in the festival of Venus and Neptune, derobing herself on the temple steps by the sea, and then, after openly displaying her naked and exquisite charms to the people, entering the water and offering up the customary sacrifices to the sea-god.

Other famous hetairæ were Pythionice, the mistress of

Harpalus, who was the virtual Queen of Babylon as well as ruler over her lover; Glycera, who succeeded Pythionice in the favour of Harpalus, and after his defeat and exile became the mistress of Menander, the celebrated poet, and of Pausias the painter; Leontium, the favourite of the philosopher Epicurus; Theoris, the mistress of Sophocles; Theodote, the courtesan who was protected and kept by Socrates; and others too numerous to mention.

In addition to these four regular classes of prostitutes there were certain disreputable and very poor women, who, under the cover of night, offered themselves to anyone who would have them, for a few pence or a bottle of wine; they were frequently criminals who added robbery to prostitution.

It is especially worthy of note that even in those days most of the loose women, except the very young and beautiful ones, made a practice of painting their faces so as to disguise the ravages of time and debauchery. They wore highly coloured and flowered robes; and they frequently dyed their hair to a golden hue. Although thousands of years have passed since these women lived their butterfly lives in the dissolute cities of ancient Greece, we find the same tendencies to gay attire, to powder and paint, and to yellow hair amongst the demi-monde of our present generation. Amidst the changes of the passing centuries of time, prostitution, its customs and practices, and its results, have scarcely altered, even in their outward form.

Amongst the Romans, prostitution was common from the earliest times. Three hundred years before Christ it is recorded that during the Floralian games nude prostitutes danced and sang before the people, and exhibited themselves in every position likely to excite the senses of their audience. By law all women of easy virtue were compelled to register at the office of the ædile, and having so registered were branded as prostitutes for the rest of their lives. These women were frequently concerned in the initiation of much sensual depravity, which they acquired from mixing with foreigners, and scandalous debauchery became common in the city. Laws were then passed to restrain the sensuality of the people and to degrade the position of the prostitutes, but in spite of the power of the ædile to drive them from public thoroughfares

and to enter brothels at any hour of the day or night, provided that he wore the insignia of his office, prostitution continued to flourish and the laws were constantly evaded. In the reign of the Emperor Trajan it is stated that there were more than thirty thousand registered prostitutes in Rome. Various classes were recognised, and comprised kept-women; women who had belonged in early life to respectable families; women who were renowned for their beauty and who wore the scantiest attire; night-walkers; girls who frequented burial-grounds and the precincts of groves, commons and country roads; prostitute thieves; servants at low inns and taverns; and foreign female dancers who resembled the flute-players of Greece, and were often Greeks, Syrians, Egyptians, or Spaniards.

It is unfortunately true that male prostitutes and sexual perverts were almost as common as the loose women, and that the vice of sodomy was so well known amongst the Romans as almost to escape special mention, the leading historians regarding it as a matter of course.

The regular houses of prostitution were called lupanaria, and were managed either by the women themselves or by a brothel-keeper. They were fitted with small apartments for the individual prostitutes, profusely decorated with erotic pictures and decorations, and supplied with reversible tablets to show whether the room was vacant or occupied by a client. Some of the lupanaria were magnificent houses, beautifully furnished and supplied with numerous servants and attendants. Others were hovels of the filthiest description. Besides these regular lupanaria, various irregular places of accommodation were utilised. The dark arches under private houses, balconies above the streets, stables, and the under-parts of theatres and of the great circus of Rome were frequently employed. The celebrated Messalina is reported to have visited the lowest of these fornices, pergulæ and stabula, as well as every lupanaria in the town.

The Roman baths, too, were favourite places of prostitution, particularly in the early days of their inception, when they were very badly lighted and there was no separation of the sexes. Even later on when these defects were remedied, there was ample opportunity for meetings in the corridors, and the cells

attached to the bath-houses for purposes of massage were little more than apartments for secret immorality. Inns, taverns and places for public entertainment were used freely for prostitution, and the law appears to have considered the servants of all such establishments as ordinary prostitutes. The gardens and groves around temples and famous statues were also selected by abandoned women as rendezvous for immoral purposes, and the lowest-class prostitute did not hesitate to sell her favours in any dark passage or corner that could be made to serve the exigencies of the moment.

Roman prostitutes were required to wear the toga like men, and their dress had to be made of some flowered material. They were forbidden to put on the stola which concealed the chaste female form, the fillet which bound the Roman lady's hair, or the shoes which were likewise part of her attire. Jewels and purple robes were also denied them. They were directed to dye their hair yellow or red and to wear gilt-corded sandals. They were not permitted to use vehicles or litters. Most of these regulations were openly infringed, however, and little attention appears to have been paid to them by the famosæ or delicatæ—the highest class of prostitutes, already referred to as kept-women.

Much was made of the acquisition of a virgin by a brothel-keeper. Laurel wreaths were hung over the door, a large lamp lit at night and a tablet extolling the unusual qualities of the girl freely exhibited in a conspicuous position. The fortunate profligate who succeeded in purchasing the prize was afterwards crowned with the laurel by the attendants of the place.

Very few prostitutes attained the celebrity of those Grecian courtesans to whom reference has previously been made. It is true that Ovid, Horace and other famous Roman poets wrote volumes about their mistresses and favourites, with whom they appeared to have lived in open immorality, but beyond their names we do not know any facts about them. The poet Martial, who wrote some fifty years after Ovid, gave a very vivid series of pictures concerning the immoral tendencies of his time. His works are certainly the most indecent and depraved of any known author, ancient or modern. He

describes every kind of perverted sensuality, but does not give the history of any individual prostitute. It is quite certain, however, that many women of the courtesan class amassed a good deal of wealth from their profession, and doubtless much local reputation also. In Martial's time Rome was notorious for its prostitution, its sexual perversions, and its open immorality. The most lewd and disgusting frescoes and paintings were freely exhibited; indecent writings, obscene comedies, and filthy illustrations abounded everywhere; statues of Priapus with his enormous penis could be seen in the public parks; painted women lolled about the streets; naked prostitutes lay on the grass of the fields; nude men and women committed the most indecent acts in the public baths; everyone, from the emperor downwards, sought to discover new methods of sexual pleasures. It seemed as if every possible depravity was utilised to stimulate those who had tired out their jaded bodies and senses with ordinary fleshly lust. Augustus, Tiberius, Caligula, Nero, and a host of other depraved and dissolute emperors, ravished every woman who took their fancy, whether she were a courtesan or the daughter of a senator; they debauched and violated their own sisters and female relations; they instituted feasts at which men and women were required to perform the sexual act in public for the edification of select audiences; acts of sodomy and bestiality were openly encouraged by them, and every new kind of sexual abomination received their enthusiastic approval and support.

It is uncertain whether what we now call venereal disease existed, as such, at the period we have just been discussing. Probably it did, although we have no absolute proof of it. At all events the women of the period suffered from a variety of sexual disorders and diseases which required medical attention. The Roman doctors having declined to treat these " secret " diseases, their cure was relegated to quacks, enchanters and midwives. The results were decidedly bad, and later on a number of Greek physicians were induced to settle in Rome, and began to apply themselves to the treatment of sexual disorders. Nero also appointed a court physician, who supervised to some extent the health of the city; and following

this a number of doctors were given official positions in all the principal cities in order that they might gratuitously treat the poor, whilst at the same time they were permitted to receive fees from the rich.

With the advent of Christianity an improvement began slowly to take place in public morals. The Christians laid such stress upon the leading of a simple, unostentatious, and pure life that the dissolute Romans were impressed in spite of their hatred of the new religion. All attempts to stamp out the so-called heresy failed. Christians were submitted to every possible indignity. They were executed, burned, tortured, thrown to the lions, their families deprived of all civil rights, their wives and daughters violated and subjected to every possible indecency and degradation. But in spite of all these things the Christian sect multiplied in numbers and gained ground. The position of woman in the household was improved, she received an education that trained her mind, and purity of thought and act took the place of a former disregard for these matters. The Christians did the utmost in their power to convert prostitutes, and many remarkable instances were chronicled by early writers of the Christian era. The Romans retaliated by dishonouring as many of the Christian women as they could get hold of. Further, they accused the Christians of being not only heretics but also hypocrites. They alleged that the new religion bore a strong resemblance to the worship of Isis, and that many of the sect were actually persons of depraved instincts and sensual habits, who wore no clothing and accompanied their religious rites with promiscuous sexual intercourse. The accusation was false, but some small grounds for it were given by the fact that certain members of the community in an access of religious zeal lived in seclusion in the woods, and denying themselves all pleasure and comfort subsisted on the coarsest food and clothed themselves in the scantiest of attire. As a natural result some of these recluses became mentally deranged, and their excessive piety assumed a form which was deplorable and liable to cause suspicion in the minds of their opponents. Colour was added to the suspicion by certain persons professing Christianity but actually engaging in the grossest sensuality. They were, indeed,

immoral and often sexually perverted criminals, who attempted to cover their debauchery with the cloak of religion. It is to be regretted, moreover, that certain of the early Christian churches converted pagan idols, including the offensive Priapus, to their own use. By giving these idols the names of saints it was thought that there would be no harm in praying to them, and by changing festivals and dances formerly associated with the worship of Venus into similar proceedings given in honour of the Virgin Mary, it was considered that no evil could result. The pagans, however, had some excuse for viewing the conversion in another light. Further, the leaders of the new faith did not universally condemn prostitution: some, indeed, considered it a necessary evil, although they made unceasing efforts to mitigate it, and regarded anyone who connived at the prostitution of females as a person deserving of the severest punishment. As a result of Christian efforts, first the tax on brothel-keepers, and finally the tax on prostitutes, both of which had yielded a considerable revenue to the State, were given up by the Roman emperors. The prostitute tax, or chrysarguron, was only actually abolished as late as the fifth century by the Emperor Anastasius, who also caused all the records and rolls of the tax collectors to be publicly burnt.

The Emperor Justinian was the first who permitted prostitutes to be granted some sort of civil rights and allowed them to marry citizens. He was probably influenced to do so by the fact that he himself had married a courtesan who had been a ballet-dancer. This woman, the Empress Theodosia, desired so ardently to reform her former associates that she built a palace on the shores of the Bosphorus in which she placed five hundred prostitutes of Constantinople and kept them there in seclusion, hoping in this way to restore them to the paths of virtue. The experiment was unfortunately not a success and had to be given up, several of the women committing suicide from *ennui*.

From this early period of history down to modern times prostitution has continued through the ages to play its part in the history of every nation of the world. From time to time serious efforts have been made to eradicate the evil, but always without success. Laws and regulations have been passed

imposing severe penalties and restrictions upon prostitutes, upon brothel-keepers, and upon persons who had dealings with them. All to no purpose. Prostitution has existed and flourished under every form of government, in every race, in every clime. Religion has been powerless to suppress it. The Law has not diminished its scope. Neither punishment nor indulgence has succeeded in effecting the reformation of those who have adopted the vice as a living. And it is more than probable that prostitution will continue until the end of the world.

Nevertheless there exist at the present day cheery optimists who believe that by publishing broadcast the evil results of irregular intercourse, by educating the people to understand the risks of venereal infection, by advocating early marriage, by amending the divorce laws, by serious attempts to provide erring women with the means to live decent lives, by raising the moral tone of the nation, and by lessening poverty and unemployment, as well as by controlling the vices of the rich, prostitution as a profession may be finally abolished, or at all events relegated to a very back place in the history of generations to come. The prospect is a vastly pleasing one, and even if it never materialises, at all events the world will be better off than if the attempt were never made.

CHAPTER XIII

CLOTHING

THE subject of women's clothing is one which demands consideration from several standpoints. It must be studied from the point of view of health and also by considering its influence mentally, morally, and sexually upon the woman herself and upon society generally. Further, we have to consider why under certain conditions lack of clothing may be free from any suggestion of indecency and under others synonymous with immorality.

Amongst present-day European women, society demands that the whole of the body except the head and neck, the arms and the upper portion of the bust must be covered with some sort of clothing, whilst special care must be taken that under no conditions shall any portion of the external genitals be allowed the chance of exposure. Any such exposure is deemed to be highly indecent and reprehensible, and is indeed punishable by law. Some relaxation in the covering of the legs and part of the abdomen is permitted on the stage, but otherwise all civilised nations are agreed upon the moral necessity for covering the trunk and lower limbs with adequate clothing which must be of a distinctive female type, the questions of support and warmth being left to individual tastes.

On the other hand, amongst primitive people, complete nudity is not associated with any sense of shame, and the Bakäiri, for example, go about their ordinary avocations quite naked and devoid even of a loin-cloth, though some wear a little apron for the purpose of protecting the mucous membrane, and not with the idea of concealing the sexual parts. The Suyá women, to quote another instance, wear no clothing and expose their genitals quite freely to strangers. Further, many savage races wearing loin-cloths, threads and beads, do so merely for purpose of adornment.

It would therefore appear that whilst among civilised people there is an intimate relationship between clothing and the sexual sense of shame, amongst primitive races this relationship does not exist. There is little doubt, however, that if we except the most primitive peoples, there is a general tendency to conceal those parts of the body which are concerned with secretions and excrements, namely the genito-anal regions. The original reasons for this concealment were probably two-fold: first, that the female wished at times to repel the advances of the male; and, secondly, that she feared to arouse sensations of disgust or dislike by exhibiting herself when unclean from natural causes.

Apart from the matter of concealment, as time went on a general desire to ornament the body arose: coloured pastes were employed for this purpose, and iron-rust mixed with reindeer fat was probably one of the earliest of these. Tattooing was likewise employed by palæolithic man as a means of gratifying personal vanity; it may also be regarded as a primitive idea of clothing, but this was probably of secondary importance, for amongst certain savage tribes at the present day we find the women tattooing themselves exclusively over the genital region in order to attract the attention of the men: this tattooing, moreover, is usually performed immediately after the girl has had her first menstrual period.

In civilised Europe the tattooing of women has never gained much favour, and except in rare cases is unknown amongst the better classes to-day. The rare cases are usually those of distinguished courtesans and libertines who desire to find some novel excuse for displaying their charms in a state of nudity. Amongst the poorer classes the women friends of sailors are occasionally persuaded to undergo the process of having small tattoo marks symbolic of love attachment made upon the arm, but even here the practice is not very common. Only amongst prostitutes, criminals and the very lowest or most sensual women is erotic tattooing at all prevalent, and then representations of the most obscene and disgusting nature may be found on various parts of the body, more particularly the breasts, abdomen, and thighs.

Following painting and tattooing of the skin by early races came the wearing of attractive ornaments about the external genitals. Concealment was still not the original object, rather the reverse. Later the idea arose that the genitals were connected with magic and should be shielded from view, both to protect the owner and the observer. With the development of some degree of social delicacy the parts were covered to prevent any disagreeable smell becoming noticeable. Still later married women clothed the private parts to show that they were the private property of their husbands, not to be interfered with by others: unmarried girls wore no clothing. Then unmarried women were clothed, to show that they were the property of their parents. And eventually all women and girls adopted some form of covering for the sexual parts and the buttocks. It is, however, to be remembered that the original idea of clothing was (like painting and tattooing) to attract the opposite sex, and that complete nudity was characteristic of decency. There was also possibly the idea amongst primitive people that a covering would stimulate interest and desire and so aid the woman in obtaining a partner. Thus, amongst the Saliras, in modern times, it is stated that only the loose women wear clothing, and do so in order to excite the sexual passions, whilst certain tribes in Central Africa clothe their young maidens for the purpose of rendering them more sexually attractive and so obtaining a good *parti*.

It is an indisputable fact that as long as man has been man, his senses and his passions have been more easily aroused by things that were concealed than by those which were obvious. Even at the present day a perfectly nude woman produces less desire for possession than one partly clothed, and so well is this fact recognised that even those who make it their business to stimulate the sexual passions of the male will always attempt to do so by means of scanty suggestive attire in preference to entire absence of it. Suggestion is always found to be more effective than the reality, and the form of female attire which accentuates and enlarges the outlines of parts in the neighbourhood of the sexual organs is freely adopted by all classes of society who desire to be "fashionable." Probably they do

not recognise that at the bottom " fashion " has for its main object sexual stimulation, but this is none the less true, and a little unbiassed reflection and careful study of the subject will convince even the most sceptical. In classical antiquity the women adopted thin, transparent fabrics to show off their graceful outlines and hidden charms. Then, when dress became more elaborate, and underclothing was added to the outer attire, the sex stimulus was brought into play by condemning an exhibition of this underclothing as improper. The narrowing of all attire at the waist next served to show off the breasts and abdomen to advantage. The corset, originally designed by ascetics to flatten the breasts and so render woman less sexually attractive, was quickly turned by the dictates of fashion to an exactly opposite use, and employed to narrow the waist, accentuate the fullness of the bosom, and display the broadness of the hips to the utmost advantage. The crinoline came into vogue for the sole purpose of displaying provocative charms, and was originally only worn by prostitutes and libertines. The fashion of making the abdomen appear large and prominent has had several periods of success from the time when Jan van Eyck made it a feature of his paintings down to the eighteenth century. Even the present-day fashion of tailor-made costumes has a sex-stimulus—the costumes are cut and fitted by men, and are designed to show off the broad pelvis and the contour of the hips.

The question is often raised as to the reason why the clothing of men and women should be so essentially different. The answer is, that the anatomyof the pelvis and thighs is not the same in the two sexes. In women the pelvis is wider and the upper ends of the thigh-bones are consequently further apart. Then since the femora must come together at the knees they have a greater obliquity in women. The result is, that women present an ungainly appearance in trousers, whilst in skirts the broad pelvis and slanting thighs are not displayed to disadvantage—rather the reverse. It must also be remembered that women's thighs are shorter than men's, and that as a natural consequence a woman appears somewhat stumpy in male attire. Further, the usual clothing of the male is incapable

of much variation in style, and is generally much simpler and less attractive than that of women. At certain periods of history there have been exceptions to this rule, but on the whole the statement is correct. Finally, since society has decreed that men and women must dress differently, women have naturally claimed for themselves a form of attire best calculated (1) to exhibit their form to advantage, (2) to act as a means of sexual allurement, and (3) to prove suitable for their physical requirements.

Many attempts have been made to banish the corset from the wardrobe of the modern woman. It has been branded by medical experts as unhygienic; harmful to the abdominal and thoracic muscles; a cause of anæmia, lung and heart disease, liver disease, gastric and intestinal disorders; harmful to the uterus and ovaries by causing displacements and inflammatory affections; a cause of abortion, miscarriage and sterility; tending to the production of constipation, irritability and disease of the bladder, retention of urine, and kidney disease and displacement; an active agent in the causation of nervous troubles, hysteria, neurasthenia and neuralgia; and as a garment which weakens and debilitates the constitution and condemns a woman to life-long suffering and ill-health. The complete abandonment of the corset is strongly urged, therefore, by those who are enthusiastic in the desire to reform women's dress, and it is probable that, as far as the old-fashioned stays is concerned, its disuse could only be to the advantage of the individual. But as regards the modified, flexible, low-cut, shallow and easy-fitting corset which has recently come into vogue, it is doubtful if such a scathing condemnation as that just given can be substantiated. Provided that the obvious evil of tight-lacing is avoided, and provided also that the corset is properly shaped and of suitable material, one fails to see how it can do serious harm. On the other hand, it is undeniable that many women find comfort and support from its use. Especially is this the case (1) with married women who have had a family, (2) in delicate girls compelled to work and yet leading sedentary lives without any opportunity to develop their muscles, and (3) in those

whose occupation demands a good deal of hard manual labour.

The wearing of certain kinds of clothing undoubtedly has an effect upon the nervous and sexual systems of the individual. Thus, garments of cheap and coarse material appear to depress the mind, whilst beautiful and fine clothes act as a stimulant to the senses. In the latter category one would include silks, velvet and furs for outer attire, and fine linen, silk, lace and embroidery for underclothes. Jewellery and personal ornaments, though not strictly articles of dress, may also be included in the list, and there are few women who do not derive pleasure and a certain amount of physical benefit—even though temporary in nature—from wearing them. Doubtless this may be due in some measure to the fact that the recipients have an affection or liking for the donor, but the matter of self-adornment is also an important factor in the case. It is not infrequently noticed that a woman in weak health, or recovering from an illness, actually and definitely improves by putting on a new dress or some costly jewellery or trinkets; whilst a visit to the dressmaker or milliner will often enough be sufficient to turn a woman's thoughts from a melancholy or depressing channel into one of pleasurable excitement; and although it must be admitted that the experiment is often a costly one to the male relatives of the invalid, it is sometimes a helping factor in the patient's recovery that deserves a trial.

Apart from the quality of female attire, the actual cleanliness and neatness of it are unquestionably of considerable importance in matters of a sexual nature. The woman who neglects to keep her clothing spotlessly clean and trim is apt to lose her charm over her husband, and many a case of married unhappiness can be directly traced to slovenly habits on the part of the wife. Especially is this the case in respect of the underclothing, by which sexual stimulation is most strongly engendered. It is, indeed, a factor which no woman can afford to neglect. Underclothing, generally speaking, should be made of woollen material. In this uncertain climate it is not safe to trust to linen or cotton alone, although these may be worn in addition. The woollen garments need not be thick, indeed it is often preferable that they should be the reverse,

or the skin may be irritated and unbearable itching result. Thin woollen combinations covered with fine cotton garments provide the necessary warmth combined with the æsthetic appearance of pure white underclothing which will meet the requirements of both health and elegance. I would lay a little stress on this point, because some women who are wise enough to adopt warm underclothing are not also wise enough to recognise that total absence of white frills and furbelows may render them sexually unattractive to their husbands. Protection for the chest is almost as important as protection for the rest of the body. It is frequently disregarded, and one constantly sees girls and young women with so little covering above the level of the corsets that it is a matter for surprise if they do not suffer in consequence. The term "pneumonia blouses" applied to some of the flimsy upper garments which have become the fashion in these days is not without meaning and significance.

The extremely low-cut dresses almost universally used for evening wear are also deserving of condemnation. They necessitate an undue exposure of the shoulders and bust, and certainly give rise to many throat and chest troubles, to say nothing of rheumatism, neuralgia and a host of minor complaints, whilst the effect upon the opposite sex is not always what might be desired. In the case of a well-developed woman there is no doubt that the exhibition of nearly the whole of the breasts may stimulate sexual desires, but if the woman herself is of good moral character the result may be to drive the man to satisfy his aroused passions with a prostitute; whilst in the case of a thin, ill-developed female the exposure of a bony chest and rudimentary mammæ may merely produce a feeling of aversion. The whole proceeding is certainly more fraught with risk than benefit as far as both health and the allurement of the male are concerned, and the modern woman would do well to remember that undue exposure of her charms (or deficiencies) may operate in the contrary direction to that which was intended It is noteworthy, however, that of late there has been a tendency to modify the extreme *décolleté* that was prevalent a few years ago.

The length and width of the skirt have altered very markedly during the last decade. The old fashion of long trailing skirts has quite died out, with the best results from a hygienic point of view. There is no possible doubt that short skirts are more comfortable, do not impede walking nor collect dust and dirt from the ground nearly as much as the old-style variety, and are certainly more becoming to most women. For a time there was a tendency to make them too tight, with the result that the wearers could only take the shortest of steps and ran grave risks of accidents if they made active movements; but this absurdity was quickly recognised and remedied, and the present fashion is probably the best that has so far been evolved in this country. On the Continent, and to some extent here also, the ultra-fashionable woman exaggerated the shortness of the skirt to a degree which caused deservedly unfavourable comment, but on the whole it would seem that the reasonably short skirt has come to stay, and from every point of view it is to be devoutly hoped that the surmise is correct.

The short skirt has, however, produced one regrettable departure from hygiene in the wearing of excessively thin stockings, which, although attractive and becoming, are a menace to health in cold and wet weather.

As regards shoes and boots, women almost invariably wear those which add to their height and make their feet appear small. For the former purpose high heels are employed, for the latter pointed toes and tight fittings. The high heels disturb the balance of the body and throw undue weight upon the anterior portion of the foot. The pointed toes compress the toes together and cause corns and callosities. Tight-fitting shoes and boots distort the natural shape of the foot, impede the circulation and render walking uncomfortable or painful. All three defects are injurious both to the foot and to the general health for obvious reasons. In exaggerated forms of fashionable footwear the modern woman is scarcely able to walk a yard in reasonable comfort, is liable to be thrown down or sustain a twisted ankle by the high heel catching in holes and clefts in the roadway, and suffers spinal and abdominal irritation by reason of the unnatural poise of the body and the

altered position of the normal centre of gravity, whilst she is also prevented from taking that amount of outdoor exercise which is requisite to maintain herself in good health.

It is stated by some authorities that the wearing of shoes with long pointed toes had its origin in an attempt to imitate the appearance of the penis, but this refers more to male than female footwear. The association between beautiful shoes and erotic stimulation is, moreover, well known. Not infrequently one hears of men drinking costly wines from the shoe of some celebrated courtesan at a joyous banquet given in her honour. Shoe fetichism is probably the commonest form of clothing fetichism and is closely associated with the fondness for beautiful feet and ankles, which in some men amounts to a most powerful sexual lust. This form of sexual perversion leads the man to prize the covering of the foot more than the foot or even the woman herself. The sight of a woman's shoe produces in him pronounced sexual stimulation. He collects the shoes and boots of his mistress, kisses them and fondles them, and is excited thereby to the point of a sexual orgasm and an emission of semen. The colour and odour of the leather is also of importance, and with some the high heels alone are sufficient to arouse his passion. Other perverts desire to be trodden upon by a woman wearing beautiful shoes; other, again, devise strange methods of torture to be inflicted upon them by the wearer of high-heeled boots, and so on.

Besides footwear, various articles of women's underclothing have a stimulating sexual effect upon men with perverted tendencies. Thus, some men are only able to have proper connection with women wearing black silk stockings, or white corsets, or red silk skirts, or pink nightcaps, and fail altogether if these be not worn; others demand that the woman should exhibit particular kinds of underclothing in a special manner, and so on.

Most of these strange ideas are indications of abnormal mental conditions in the male, and therefore concern the man more than the woman, but they are mentioned here because in modified forms many men who could not by any stretch of imagination be considered sexual perverts are subject to them.

The sexually stimulating value of beautiful clothing must therefore be considered by the wives of such men, and advantage taken of it to remedy any shortcomings on the husbands' part. I have known of many cases where attention to this matter has proved successful in restoring marital happiness.

CHAPTER XIV

MARRIAGE AND ITS RESULTS

MARRIAGE, from the sexual point of view, may or may not be a success. It is, indeed, a difficult matter under the most propitious circumstances for two people to be perfectly mated, but where the differences are small and love is great, no trouble of any consequence is likely to follow, and we are not here concerned with the minor drawbacks and trivialities of ordinary married life. Serious difficulties may, however, arise under circumstances where one or more of the following conditions are present: (1) When the marriage is a loveless one and contracted for mercenary reasons or from motives of convenience or conventionality; (2) when one of the parties is impotent or lacking in sexual desire; (3) when one of them is too lustful or passionate; (4) when one or other is a sexual pervert; (5) when actual disease or physical abnormality is present; (6) when the mental condition is unstable; (7) when there is proof or suspicion of infidelity; (8) when jealousy or indifference and neglect are exhibited; (9) when there is marked incompatibility of temperament; (10) when alcoholism or drug habits are developed; (11) when the respective ages of the husband and wife are widely different; (12) when the two are of different races or religion; (13) when for unavoidable reasons husband and wife are frequently separated for long periods of time; (14) when there are family quarrels and undue parental interference.

Since in the present work one proposes to consider only those conditions which affect the sexual life of the woman, certain of the above-mentioned causes of married unhappiness will not need more than a passing notice. Others have already been considered under the headings of sexual excess, sexual frigidity and sexual perversion, but will be briefly reconsidered in order to review the whole question; whilst some will require special attention and study.

In the normally constituted woman, once the sexual appetite is aroused, a certain amount of sexual satisfaction is necessary for the maintenance of good health, or at least for a feeling of well-being. Hence the husband who first of all stimulates sexual desire in his wife and then subsequently neglects to perform his marital duties, is more or less directly responsible if the woman becomes neurotic or hysterical or develops bad habits in consequence. His responsibility is naturally less if the neglect is due to physical inability to continue coitus, but although a satisfactory explanation may diminish resentment on the wife's part, it is usually insufficient to relieve her physical discomfort.

Reference has already been made to the fact that, if the man be potent but experiences the sexual orgasm so quickly that, properly speaking, no actual coitus ever takes place, the woman still remains unsatisfied and may even be more adversely affected than if the attempt had never been made, for her sexual desires are stimulated without any sensation of relief following. Similar results are produced when coitus takes place more slowly, but still not slowly enough to produce the culminating effect. In many women the sexual orgasm requires several minutes of preparation before it actually takes place, and the husband who does not consider his wife's requirements in this respect will indubitably damage her nervous system. The bad habit of coitus interruptus practised for the express purpose of preventing conception is also especially damaging to women, who are thereby frequently deprived of the sexual orgasm. It is indeed probable that an absolutely impotent man will inflict less nervous damage upon the average woman, who has never had her sexual desires awakened, than a man who repeatedly arouses those desires and never properly gratifies them. Nature stubbornly refuses to be baulked in this way and will eventually find means of extorting payment for her loss.

In cases where properly performed coitus only takes place at long intervals, there may or may not be troublesome results. Much depends upon the temperament of the wife. Some women who are not particularly passionate or lustful may manage quite well with what is meted out to them, others, of

more exacting requirements, fare badly under the enforced restraint and may even find it insupportable. It is naturally an extremely difficult matter to decide what may be considered a reasonable frequency in the performance of coitus between married people, but certainly no woman has much cause for complaint if the act be properly performed six times a month, which, allowing for the period of menstruation, would mean about twice a week. There are many women who would be satisfied with much less than this, especially after some years of married life, but there are also others whom no ordinary man would be able to fully satisfy, and who therefore must of necessity curb their desires and put up with a certain amount of discomfort if they would not give way to immorality. Unfortunately a certain number, not sufficiently strong-willed to battle with their passionate nature, do give way to the impulses of the flesh and either find a lover or slowly drift into prostitution. In either case Nemesis overtakes them in the end, but whether they are to be pitied or despised is a matter which only philosophers could discuss, and it is quite certain that even then there would be much difference of opinion. At all events the husband cannot be blamed: his position is always a very unenviable one, and sometimes he may fail to grasp the situation until an attack of venereal disease or some unexpected medical event opens his eyes to a realisation of his wife's infidelity.[1]

Loveless marriages contracted for mercenary or other unworthy motives usually fail to give sexual satisfaction to either contracting party. In most cases coitus is performed a number of times, and if the wife becomes pregnant and has a family, no doubt some of her attention is diverted from sexual matters; but as the element of love and desire is lacking between the pair, there is always a considerable risk of much mental suffering on the wife's part. If she is a woman of

[1] As already mentioned in a previous chapter, sexual excesses on the part of the husband are probably more common, but less serious, than excessive sexual desires on the part of the wife. The effect in extreme cases is to weaken the woman's constitution, to render her nervous and neurotic, to induce pelvic congestion, vaginitis, endometritis and ovaritis, and often to cause a loathing for coitus and the embraces of her husband. But these extreme cases are rare.

strong sexual passions it is likely that she may seek to gratify them with a lover; or she may develop habits of masturbation or give way to alcohol or drugs. Sometimes divorce may end the wife's troubles and she may afterwards form a happy union with another husband. Very occasionally a marriage of convenience turns out quite well, the parties settling down and becoming fond of each other; children strengthen the bonds, and eventually husband and wife live together in ideal happiness and comfort. This happy result, however, is very rarely achieved.

Sexual perversion as a cause of married infelicity is not common. As already mentioned it is rare for married women to indulge in Lesbianism or tribadism, and masturbation is scarcely to be regarded as a true sexual perversion. If the husband is sexually perverted, the wife is likely to suffer both from lack of coitus and also from disagreeable mental impressions derived from a knowledge of her husband's disgusting habits. Should the latter, however, be kept secret and the man not entirely homosexual, it is possible that his partner may lead a normal existence. That such conditions do exist has been proved by evidence given at the trials of notorious male perverts.

As regards the effects of disease, diabetes, cancer, heart-disease, consumption and other serious constitutional maladies, tend to render the husband impotent, although often not completely so. Chronic gastro-intestinal troubles, neurasthenia, melancholia and general debility produce similar results in a certain proportion of cases. Venereal diseases have both physical and mental effects to be reckoned with. An abnormally small penis, hypospadias and epispadias, and under-development of the male sexual organs generally, may interfere both with sexual desire and with the capacity for coitus. Further, such men are often abnormally sensitive of their shortcomings, and may in consequence shrink from attempting intercourse, especially if their wives are at all inclined to ridicule any attempts which they may make. I remember very well the case of a man with a small penis (which was nevertheless capable of some degree of coitus) who was absolutely

impotent as regards his wife simply because she laughed when he attempted intercourse with her. That he was only relatively impotent was proved by the fact that he had a son by another woman.

Mental influences are frequently more powerful than bodily disease in producing impotence in the male. Many men have a dread of marriage for fear that they may be unable to perform their marital duties satisfactorily. If they do marry and their wives show the slightest tendency to impatience or are lacking in tact, these men appear to lose all power to obtain an erection and become confirmed neurasthenics. Some of them, however, are quite capable of being sexually aroused by a prostitute, and therefore resort to such women with avidity for the sole purpose of convincing themselves that they are still potent. Their wives usually become cognisant of this in time, but seldom realise that they themselves are to blame, and by considering the men to be hopelessly immoral and unfaithful they only make the breach more impassable.

Constitutional disease in the wife generally causes her to have little desire for sexual excitement. She may, however, consent to coitus merely from a sense of duty or with the idea of keeping her husband from other women. Pelvic disease, such as enlarged and painful ovaries, prolapsed ovaries, tubal inflammation, or uterine affections may render coitus painful or impossible. Dyspareunia may also be due to vaginal inflammation, uterine prolapse, uterine malignant disease, vaginismus and a host of other local conditions.

Women of unstable mental tendencies are generally profoundly unhappy in married life. They render themselves, their husbands, and all around them more or less miserable and unsettled. Some desire frequent intercourse and become hysterical if this is refused, others become hysterical if coitus is attempted. Many consider themselves chronic invalids without cause, others become devotees of every crank and fad that they can discover or come in contact with. Others, again, go in for extravagant living, jeopardise their husbands' financial means, and seem unable to exist without constant amusement and diversion. Frequently their mental equilibrium

seems to waver in the balance, and attacks of hysterical excitement may alternate with the most severe depression and melancholia.

It is unnecessary here to dilate upon the unhappiness in married life caused by such conditions as infidelity, jealousy, indifference and neglect, and incompatibility of temper. They are all, unfortunately, too common to require much comment. And yet, how often does a jealous woman suspect her husband of infidelity without just cause, and how often does the husband, goaded to desperation by his wife's bitter words, resort to indifference and neglect in consequence! Incompatibility of temper is an expression frequently used, and frequently quite meaningless in its application. No doubt it is often meant to cover a multitude of sins which the parties do not desire to name in public, yet in some countries it is considered *per se* to be sufficient excuse for divorce. Perhaps if we considered it to include jealousy, brutality, infidelity, sexual perversions, alcoholism, drug habits, neglect and indifference, and actual disease, its meaning would be made more clear.

As regards the influence of alcoholism and drug habits in producing marital unhappiness, this is undeniably a most evil one. The victims are very seldom capable of reformation, they disgrace themselves and their families, they ruin their lives, and lead an existence certainly lower than that of animals. The conditions ought to be considered fit grounds for divorce. Unfortunately in this country the laws do not provide for such cases and the unhappy partner has to make the best of his or her lot. Alcoholism we have been pretty well acquainted with for many generations, but it is only comparatively recently that drug-taking has come into prominence. Possibly the Great War has had something to do with the production of a very considerable increase in the number of morphia and cocaine takers, and the recent Government restriction upon the sale of these dangerous drugs is a pretty obvious sign that the authorities have begun to realise the seriousness of the new peril. Many hundreds of morphomaniacs and "white snow" victims are to be found in every large town, and the number of families that have been adversely affected as a direct conse-

quence is much larger than the average person has any idea of. It is probable, however, that still stricter regulations will be necessary to put an end to this really terrible vice.

The marriage of elderly men to very young women is well known to be a risky strain upon the future domestic happiness of the united couple. Where the husband is well advanced in years, his sexual powers, even if present at the time of the actual marriage, speedily wane and disappear. The young wife, then, is deprived of sexual gratification almost as soon as desire is awakened. In the full bloom of her womanhood she is compelled to live in the closest intimacy with an old man whose sexual life is past and who can do nothing to satisfy the imperious calls of her nature. The result is little less than a tragedy. A moderate difference between the ages of husband and wife is another matter, and if this does not amount to much more than ten years it is probable that little harm will result.

As medical men we are not concerned with such matters as race and religion, nor with family differences and quarrels, but the influence of all these factors upon married happiness is well known. Prolonged separation of husband and wife is undoubtedly detrimental sexually to both parties and is an important predisposing cause of infidelity and its consequences. Since the separation usually induces sexual excesses when cohabitation is resumed there is the risk of some damage to the sexual and nervous systems to be remembered also.

In attempting to formulate some general conclusions regarding marriage and its results upon both husband and wife, one is immediately faced with the greatest difficulties. Thus, to begin with, it is necessary to have truthful records of a very large number of cases. Next, these records must extend over a prolonged period of time in each case. Thirdly, the records must include all classes of society. Fourthly, the influence of children must be considered. Fifthly, the question of disease in either or both parties requires investigation. Sixthly, the temperament of husband and wife must be known. And, finally, an intimate knowledge of the private life of the married couple is absolutely essential. Without these details it is

impossible to give results which are reliable and of practical value.

To obtain them, every source of information must be tapped, statistics collected and submitted to thorough investigation, and reliance placed only in an impartial and careful investigator. One is therefore more or less compelled to accept as approximately correct the carefully recorded evidence of such medical experts as have devoted their lives to a study of this important question. From such it would appear that fifty per cent. of marriages are definitely unsatisfactory from both a sexual and domestic point of view, whilst a perfectly happy married life is distinctly rare, occurring only in about ten per cent. of all cases.

At first sight the average reader would denounce such figures as absurd, but a little serious reflection is sufficient to make the thinker pause in his denunciation. The ever-increasing number of divorces; the records of the law-courts, the police-courts, the reformatories and penitentiaries; the indisputable evidence of the prevalence of venereal disease, alcoholism and drug habits amongst the married; and the combined observations of every class of social worker and professional man and woman—all tend to prove the existence of much misery and domestic discord in married life. The old-established practitioner looking back upon his career will be able to cite innumerable instances of patients whose family lives have been marred by domestic quarrels and differences due to troubles in which sexual relationship has had a prominent part. The experienced lawyer and jurist will tell the same story; the clergy and even the ordinary man in the street will back it up with the experiences of daily life.

One has to remember that in a vast majority of cases married unhappiness is not made public property. Many women will keep their wrongs to themselves, especially if there are children to be considered. Women with impotent husbands will frequently say nothing of their deprivation of sexual gratification. The wives of brutal and degraded men may still love their unworthy partners and seek to protect them from the criticism of neighbours as well as from punishment for their wrong-

doing. Similarly also, husbands frequently excuse or gloss over manifest faults on the wives' part. Again, where both parties are to blame, each may attempt to conceal matters from the outside world and vigorously resent any interference or even questioning from a third person.

But apart from acute troubles, a very common danger to married happiness is that of habituation. An unvarying daily routine blunts the sense of love and passion and turns it first into a comfortable habit, and then possibly into a kind of latent dislike if either party exhibits selfishness, indifference, or lack of consideration for the other.

In a well-matched couple, that is to say, where husband and wife love each other and where their sexual life is conducted on normal lines, the lack of children is generally a source of mutual grief. A consideration of the causes of sterility is therefore of very considerable importance, and as an addition, a study of the etiology of abortion and miscarriage is also necessary, since these are naturally productive of the same unfortunate condition.

In perfectly healthy and normally constituted individuals the acquisition of a family depends to some extent upon the respective ages of the married couple. From an investigation of a very large number of cases it is agreed that—

(i) Where the husband is advanced in years the chances of his becoming a father are small, but there is no age at which the possibility is absolutely absent.

(ii) The older the wife the less her chances of becoming pregnant, but mothers up to the age of fifty at delivery are not infrequently met with, and rare instances are recorded up to the age of fifty-five and even older.

(iii) In certain cases a condition of sexual incompatibility exists, with the result that no offspring can be produced. The husband may have a child by another woman and the wife by another man, but husband and wife have no family by each other no matter how often perfect coitus occurs.

(iv) Where either party is very considerably older than the other, although neither is advanced in years, there is a tendency to sterility.

(v) Where husband and wife are closely related, and where they are very much alike in appearance and temperament, the chances of fertility are diminished.

With regard to the fertility of women in good health the following points may be noted—

(1) Instances of pregnancy at the age of ten are not unknown in warm climates where the girls mature very early; between eleven and twelve years births are frequently recorded. In this country motherhood before sixteen is extremely rare, although not by any means unknown. The children of very young parents have a smaller chance of survival than normal.

(2) Several American and continental authorities have stated that they have met with women who have borne children regularly from puberty to the menopause, the actual number being twenty-four or over. In this country fifteen or sixteen are fairly common and twenty have been occasionally recorded.

(3) The highest fertility appears to occur when marriage takes place between a man of twenty-four and a woman of twenty-two.

(4) In a majority of cases of fruitful marriages the first child is born some time during the second year.

(5) The average interval between two successive births is about two years, unless a child dies at birth or lactation is unduly prolonged. In the first case the period is diminished and in the second case it is increased.

(6) Women who marry very young are not as fertile as those who marry between twenty-one and twenty-four.

(7) The older the woman is over the age of twenty-four the longer the interval between marriage and her first delivery.

(8) In England the maximum fertility of married women is attained at about the age of twenty-three. On the Continent the age appears to be considerably higher.

(9) Where measures are taken to prevent conception during the early years of married life, fertility is diminished afterwards.

(10) Since preventive measures are more generally adopted

amongst the higher classes of society, these have the fewest offspring.

(11) The following conditions tend to lessen fertility: bad climatic conditions, unhealthy occupations, irregular living and excesses, poverty and mental distress, ill health, famine and war.

Turning now to a consideration of sterility caused by actual deformity or disease we find as common causes—

(i) Inability of the husband to furnish healthy active spermatozoa and to deposit these within the vagina of his wife. This may be due to the absence of testicles, to disease of the testicles, to impotence, to minute size of the penis or extreme malformation of this organ, to severe constitutional disease, or to extreme obesity. The most common cause is undoubtedly gonorrhœa.

(ii) Inability of the wife to provide a healthy active ovum: this is generally due to ovarian disease caused by chronic inflammation.

(iii) Pelvic disease in the wife, such as inflammation, disease, tumour, malformation or displacement of the Fallopian tubes, ovaries and uterus.

(iv) Also such conditions as dyspareunia, vaginismus, imperforate hymen, lacerated perineum, and operative removal of uterus, tubes and ovaries.

The most common causes of sterility in the woman are: Gonorrhœa, infantile or undeveloped uterus, uterine fibroids, ovarian tumours, pelvic inflammation and injury following confinement, tuberculosis of the tubes, retroflexion and prolapse of the uterus, chronic endometritis, cancer of the uterus, fibrosis of the uterus, appendicitis, and malformations.

We must remember, in dealing with cases of sterility, that although there may be some affection or disease of the female sexual organs, it does not follow that she is the only party at fault as far as the sterility is concerned. She may be less likely to conceive as a result of her local trouble, but the absolute fault may lie with the husband. So that even if her own

defects be put right and the husband remains uncured, she will still remain barren. This is a point which is frequently overlooked. To make sure of the husband a careful examination of a specimen of his semen must be made. If healthy spermatozoa are found in it and if evidence is forthcoming that he is capable of depositing his seminal fluid well within the vagina of his wife, it is then clear that he is not to blame in the matter. This conclusion can only be proved up to the hilt by examining the fluid matter on and around the cervix uteri shortly after intercourse has taken place. If active, healthy spermatozoa are discovered the husband is placed in an absolutely unassailable position and the fault is undoubtedly in the wife—unless we accept the possibility of sexual incompatibility.

Amongst the essential conditions requisite for normal pregnancy the following must be complied with. (1) Healthy, active spermatozoa deposited in the vagina must be able to enter the cervical canal and pass through the cavity of the uterus. (2) The uterus must possess a normal endometrium. (3) From the uterus the spermatozoa must be able to pass into the Fallopian tubes, where a healthy, active ovum should be encountered and impregnated; for which purpose (4) healthy, active ovarian tissue from which a normal Graafian follicle can form and discharge an ovum is essential. (5) After impregnation has taken place the oöcyte must be able to travel easily to the body of the uterus, which implies a normal healthy condition of the Fallopian tube. (6) On reaching the body of the uterus the oöcyte must be able to attach itself firmly thereto, which demands a normal healthy condition of the endometrium. (7) Finally, in order that the oöcyte may grow and develop into a living being, capable of a separate existence, the tissues, blood and lymphatic fluid of the mother must be sufficiently healthy to provide suitable environment and nourishment, whilst no accident must happen which might loosen the attachment of the embryo to the uterine walls or interfere with its blood supply.

In early adult life the most important factor in producing sterility in women is undoubtedly gonorrhœa.

Syphilis has some influence in producing sterility, but the

percentage of cases is small, and the disease has a much more potent action upon the fœtus than upon the internal sexual organs of the mother. Syphilis produces abortion, miscarriage and death of the fœtus or child. It poisons the mother's system and leads to almost every kind of tissue disease and destruction, but it does not affect impregnation to any marked degree, solely because it does not produce inflammation of the uterus and Fallopian tubes in the active way that gonorrhœa does. For some reasons it is a great pity that it does not. They should be surgically treated if possible.

Stenosis of the cervical canal is a malformation of considerable importance in the production of sterility. When congenital it is frequently associated with acute anteflexion, which makes matters worse. The smaller the cervical opening and the more acute the anteflexion the less the chances of pregnancy, but no case, however stenosed or anteflexed, is necessarily sterile. Stenosis of the cervix and acute anteflexion of the uterus make it difficult for spermatozoa to enter the cavity of the uterus, and the two conditions are often associated with defective development of all the internal sexual organs. They should be surgically treated if possible.

Uterine fibroids, if not too numerous, may be removed by hysterotomy, but the uterus which has once grown a fibroid is more likely to go on growing fibroids than to conceive. If an ovarian tumour is associated with sterility, its successful removal may be followed by pregnancy.

Pelvic inflammations should be operated on, and as many adhesions as possible broken down. If the Fallopian tube is reasonably healthy, but its abdominal ostium is blocked up, this may be carefully opened or a new opening made in the dilated distal end of the tube. Injuries after confinement must receive special and early attention. Tears of the cervix should be repaired, ruptured perineum accurately stitched up, defects of the vaginal walls put right, endometritis treated by curettage, vaginal discharges diminished by douching and the use of soothing applications in the form of tampons, retroversion and retroflexion corrected by suitable operative measures, prolapse radically treated vaginally or abdominally.

Tuberculosis of the pelvic sexual organs is not the uncommon affection that many practitioners imagine. It may be primary, or secondary to infection of the peritoneum. Metritis, uterine abscesses, chronic salpingitis, pyosalpinx and ovaritis are the commonest types of tubercular disease in the female pelvis. There is little hope of curing these cases, and if operative measures are adopted the greatest care must be taken in dealing with adhesions, or in place of making things better they may be made much worse.

Malignant disease of the body of the uterus is naturally a condition preventing conception, but if only the cervix is affected and the disease is in an early stage it is not impossible for pregnancy to occur.

The part played by acid secretions and discharges in producing sterility must not be forgotten. Acid secretions rapidly kill the most healthy and active spermatozoa, and as the normal vaginal discharge is acid, it will be easily understood, that if spermatozoa remain too long in it, they will die and conception will not occur. If the husband is strong and vigorous and can deposit the semen actually on the surface of the external os, and if the wife has a definite orgasm which causes the os to dilate and at the same time secrete a quantity of alkaline mucus, then it is likely that conception will follow, no matter what the nature of the vaginal discharge may be. But if the husband has only weak erections and the wife experiences no orgasms, then spermatozoa deposited in the lower part of the vagina or in the posterior fornix may be all killed by an acid secretion before they have time to find their way to the cervix. With an unhealthy acid cervical secretion a similar fate meets them, and if the uterine and tubal secretions are also unhealthy and acid the chance of an oösperm being formed is exceedingly remote.

Note that spermatozoa live for a considerable time in an alkaline medium, and can be kept alive for an indefinite period in warm, normal saline solution. It is probable that, normally, spermatozoa do not live more than two or three hours in the vagina, but they have been seen in the Fallopian tubes as long as three weeks after coitus. They are said to reach the tubes

within a few hours of insemination, and they have been found in a few cases upon the surface of the ovary in about twenty-four hours.

The rôle of appendicitis in the production of sterility is not negligible. The appendix is normally an abdominal organ, but in some cases it hangs over the brim of the pelvis, and if inflamed may become adherent to the right ovary. By extension of this inflammation pelvic peritonitis may be set up, which will bind down the tubes and ovaries to the back or sides of the uterus and completely block up both tubal ostia, thus producing permanent sterility. This fact is a strong argument in favour of the early removal of an inflamed appendix in an otherwise healthy female.

Malformations of the pelvic organs usually require operative treatment for cure, if cure be possible. Infantile conditions of the uterus sometimes improve with medical aid or spontaneously. Medical treatment includes fresh air, increased exercise and diet, tonics, and the use of glandular extracts (endocrine therapy). Dyspareunia due to various causes must be remedied if possible, and particular attention given to the cure of such conditions as vaginismus, urethral caruncles, hymeneal caruncles, and prolapsed ovaries and tubes.

Artificial insemination may be practised in certain cases as a *dernier ressort.* A week after menstruation has finished the woman is instructed to come for treatment with her husband, who is also required to bring some of his semen in a condom. The semen must be as recent as possible and must be kept warm in a thermos flask. This semen is drawn up into a sterile syringe provided with a special nozzle, and the patient being placed in proper position, the fluid is slowly and carefully injected well into the uterine cavity. Under suitable conditions good results may follow if the semen can be obtained very quickly and kept at blood temperature until injected.

Abortion is the term used to denote the expulsion of the fœtus before it is viable. It may be due to an immense variety of causes, which are usually divided into three main groups—(1) maternal, (2) fœtal, and (3) paternal.

(i) *Maternal Causes* may be classified as follows: (1) Malformation, maldevelopment, inflammation, or (2) new growths of any part of the pelvic organs, and especially fibroids. (3) Injuries, falls, sexual excesses, fatigue. (4) Toxæmias of pregnancy and excessive vomiting. (5) Infective fevers, tuberculosis, malaria and acute illnesses of any kind. (6) Chemical poisoning and ecbolic drugs. (7) Sudden fright or shock. (8) Heart, lung, liver and kidney diseases; and (9) syphilis—perhaps the most common cause of all.

(ii) *Fœtal Causes* may be included under one or other of the following headings: (1) Low implantation of the oösperm. (2) Placenta prævia and albuminuric infarction. (3) Malformation of the embryo. (4) Disease of the fœtal membranes, such as hydatidiform degeneration of the chorion. (5) Hydramnios. (6) Diseases and malformations of the cord.

(iii) *Paternal Causes* are (1) syphilis (common), and (2) toxic conditions of various kinds (rare).

Abortion is quite common—perhaps more common than one would think. Probably one in every five or six pregnancies ends in abortion. It is seen most frequently about the third month, when the attachment of the oösperm to the uterus is still insecure and the decidua is very vascular. Hæmorrhage into the decidua is the most important factor in starting the expulsive uterine contractions. The hæmorrhage separates the oösperm from its anchorage, and may actually cause its death; it also acts as an irritating foreign body. If the fœtus dies, this adds to the irritation, and abortion naturally follows. Disease or malformation of the fœtus, or of the membranes or cord, produce abortion by interference with the blood supply, or by hæmorrhage and loss of nutrition. Excessive stimulation of the uterine centre in the spinal cord is the probable explanation of the action of shock, nerve and brain storms, strong purgatives and abortifacients.

As regards the prophylaxis of abortion, the following points should receive special attention—

(1) Syphilis (in the husband and wife) must be efficiently and carefully treated.

(2) Uterine displacements must be corrected.

(3) Any abnormal condition of the endometrium should receive special attention.

(4) Growths of any part of the pelvic organs must be removed and any inflammatory affections treated.

(5) Unhealthy conditions of living, and working in lead, mercury, glass, etc., avoided.

(6) Alcoholic and sexual excesses stopped.

(7) Overwork, mental worry, excitement, shock, and violent exercise (such as gymnastics, golf, rowing, tennis, running, swimming, and dancing) avoided as much as possible.

CHAPTER XV

ON THE PREVENTION OF CONCEPTION

It is probable that very few married women have not, at some time or another, tried to prevent conception taking place. I use the term "married" here to mean both legitimate and illegitimate unions, and it will be easily understood that in the latter variety the desire to avoid pregnancy is practically universal. But amongst those who are legally married circumstances frequently arise where the advent of an addition to the family is not desired, and where accordingly the wife is anxious to prevent such an occurrence from taking place. It is unnecessary to enumerate fully the circumstances in question, but poverty, the existence of an already large enough family, disinclination for the inconveniences and risks of child-bearing, dislike for the husband, desire for freedom to enjoy social life, constitutional weakness, and advancing years, may be mentioned as those which have a certain amount of sense and reason in their favour. It would even seem, judging by the controversy which has followed a recent rather outspoken address on sex problems and birth-control made by the King's physician, Lord Dawson, at the Church Congress meeting in Birmingham, that neither the Protestant Church nor the medical profession is prepared to condemn sexual intercourse undertaken for purposes other than the procreation of children. In direct opposition to this is the teaching of the Roman Catholics, who steadfastly maintain that the primary end of marriage is the begetting of offspring for the preservation and increase of the race, and that intercourse which frustrates this primary end is unlawful and cannot be sanctioned.

Whatever the Church or any other section of the outside world may have to say about the matter, however, it is nevertheless absolutely certain that most married persons will adopt preventive measures to limit their family whenever they

feel that either economic or domestic or health reasons demand such limitation. We, as physicians, are also bound to recognise that unrestricted procreation might end in disaster by producing an alarming increase in poverty and disease and by causing such a struggle for existence that the human body would often be quite unable to cope with it and would consequently perish. At the same time, as citizens of a civilised country, we can only sanction such preventive measures against conception as are not contrary to the laws imposed upon us—laws which on the whole are founded upon reasonable and hygienic bases. Practices which are detrimental to the health of the individual, or which tend to undermine the good morals of society, can only meet with our disapproval and condemnation, and these practices are included in those which are forbidden by the law. So that on medical grounds we even go further than the law, and discountenance certain methods which are not illegal. We shall refer to these later and for the moment merely make the assertion.

The first serious attempt to study the evils of unrestricted procreation was made by an Englishman, Robert Malthus, in 1798. He endeavoured to show that whilst human beings tend to increase in geometrical progression, the means of subsistence increase only in arithmetical progression (1, 2, 4, 8, 16, etc., as against 1, 2, 3, 4, 5, etc.). The theory was false, but it gave rise to much thought, and his suggestions for restricting the population were not illegal, nor, as is often now fancied, immoral. He merely advocated moral restraint and the postponement of marriage. These principles (Malthusianism) were later on developed into the so-called " neo-Malthusianism," which advocated public instruction in the means for preventing pregnancy and for the limitation of families, and was supported by John Stuart Mill, Charles Bradlaugh, Mrs. Besant and others. The Malthusian League was founded in 1877 and actually obtained many powerful advocates in all classes of society.

The preventive methods which are or have been in common use may now be briefly considered. They include (1) restriction of intercourse, (2) alterations in the normal method of coitus, (3) prolonging lactation, (4) using protective appliances

for the penis, (5) occluding the entrance to the uterus, (6) plugging the upper portion of the vagina or (7) introducing various special powders and chemicals, (8) douching the vagina immediately after coitus, (9) producing artificial sterility of the woman, (10) procuring artificial abortion, and (11) performing certain operations upon the man.

All methods of procuring abortion are illegal except under very special obstetric conditions; and whilst it is necessary to refer to them here, it will be well understood that in a healthy woman they cannot be sanctioned, much less performed, by any medical man. Method (11) is not illegal but is practically non-existent. Method (9) should never be performed without serious physical defects being present, and then only after consultation.

1. *Restriction of Intercourse* is certainly a means of preventing conception, since it is well known that not every coitus is fruitful. Still there remains the possibility of a good many pregnancies taking place even if connection only took place once in every two or three months, and we could not well discuss more prolonged abstinence than this. There is something to be said, however, for abstinence at certain periods in relation to the menstrual cycle. The most unfruitful period appears to be about three weeks from the last menstruation, when the probability of conception is about one-fiftieth of the maximum—which occurs during the first few days after menstruation. It is, therefore, recommended that abstinence from intercourse should take place during the first and second weeks after menstruation has ceased. It is also advised that coitus should be avoided on the last couple of days before the next period. But although the probabilities of conception may be reduced in this way, one must remember that its possibility is never excluded. The suggested abstinence during the later months of spring, recommended by certain writers, seems to be devoid of practical reasoning.

2. *Abnormal Methods of Coitus.*—(1) A very common and generally trustworthy practice as far as results are concerned is that of coitus interruptus, or withdrawal before actual emission takes place. It is obvious that if no semen is deposited in the vagina, or on the vulva, impregnation will not occur.

But in not a few cases emission may take place before withdrawal in the form of a slight oozing which is imperceptible to the donor, but which is nevertheless quite sufficient to nullify the effects of the practice. Also, at times, after actual withdrawal without either emission or oozing taking place in the vagina, drops of semen may fall upon the vulva and suffice for impregnation. Apart from prevention of conception, unless the coitus is sufficiently prolonged to enable the woman to experience the full sexual orgasm, one is obliged to condemn the practice of withdrawal as tending to produce various neuroses and pelvic disorders.

Coitus interruptus is a very old contraceptive method, and from its Biblical mention in regard to the misdoings of Onan gave rise to the term "onanism," which, although very often employed as synonymous with masturbation, is only correctly used when describing withdrawal. Thus in Genesis XXXVIII, 9, 10 we read: "And Onan knew that the seed should not be his; and it came to pass, when he went in unto his brother's wife, that he spilled it on the ground, lest that he should give seed to his brother. And the thing which he did displeased the Lord: wherefore he slew him."

Women who are frequently submitted to coitus interruptus without complete sexual relief, frequently complain of sacral pain and weakness, a sensation of weight and dragging in the pelvis and of lassitude: all the symptoms continue for several hours after intercourse and then slowly pass off, only to be repeated after the next unsatisfactory coitus. They are probably due to the intense hyperæmia of the ovaries, uterus, tubes and vagina, produced by the stimulation of coitus, not being quickly relieved by the sexual orgasm but continuing for some space of time after the stimulation has ceased. Nearly all authorities are agreed that under such conditions the act is definitely harmful both physically and mentally. Of course if withdrawal is delayed until the woman has experienced complete satisfaction and relief, she may suffer no evil effects, but even then there is the risk of the practice being too frequently repeated, when the results of excess are to be feared. Coitus interruptus is also frequently injurious to the husband owing to the fact that (i) emission is

often delayed or incomplete and so venous stasis of his sexual organs is unduly prolonged; (ii) sexual excess is often indulged in since impregnation is unlikely; (iii) irregular habits are often induced. Withdrawal, therefore, is generally disapproved of by the medical profession, although naturally the practice has no condemnation from the law.

(ii) Pressure on the male urethra with the finger is sometimes resorted to, to prevent the outflow of semen from the meatus and produce its forcible entry into the bladder. It is an extremely dangerous practice, absolutely to be condemned.

(iii) Another abnormal method of coitus, supposed to prevent fertilisation, is that in which the woman forces herself to assume a purely passive part in the act and endeavours to concentrate her mind upon other matters. It has been repeatedly proved, however, that no matter how passive a part she plays there is still a very considerable risk of impregnation, and that although desire and the suction action of the sexual orgasm increase the possibility of conception, their complete absence does not eliminate it. The method is absolutely unreliable and only worthy of passing notice.

3. *Prolongation of Lactation.*—It is well known that nursing mothers seldom again become pregnant until they cease suckling their babies. The menstrual functions are also usually absent during the same period. Many women, therefore, prolong lactation in the hope of avoiding a fresh conception whilst indulging in normal intercourse with their husbands. The practice frequently succeeds but is not absolutely trustworthy, and many women become again pregnant although suckling and amenorrhœic. Certain eccentric observers have further suggested that if the husband artificially stimulates his wife's breasts by sucking them, he may in this way prevent conception. This "artificial lactation" theory, however, has not stood practical tests and may be dismissed as ridiculous. Normal lactation, if unduly prolonged, is injurious to the woman's health and cannot reasonably be sanctioned for a longer period than nine or ten months, after which the ordinary risks of pregnancy following coitus must be taken.

4. *Protective Appliances for the Penis.*—This method of preventing conception is perhaps the most common one in

use at the present time and is absolutely trustworthy, provided that the appliance remains in place and is intact during coitus. The ordinary thin rubber or skin condom, if of suitable size and strength, effectually prevents the escape of semen into the vagina and does not materially blunt the sensual sensations. The condom (vulgarly known as a " French letter " by the English and as a *capote anglaise* by the French) is, however, sometimes made of such inferior material, or has been kept so long in stock by the retailer, that it is quite unreliable. It may have minute holes in it, so small as to escape notice but yet large enough to allow a small drop of semen to be forced through them under pressure. Or it may tear or burst during coitus, when the semen escapes freely and impregnation occurs before anything can be done to stop it.

Rubber condoms, made of india-rubber, gutta-percha, or caoutchouc, are on the whole fairly trustworthy if carefully and recently made, but they must not be kept in a warm place or carried about in the pocket. Some rubber condoms are supplied with little projections on their outer surface to stimulate the vagina and thus increase sexual sensation in the woman. Skin condoms are made out of the cæcal mucous membrane of the sheep or goat. They are dearer, but nevertheless much more fragile than the rubber variety. Although supposed to blunt sensation less, owing to their thinner texture, they are less reliable and are often badly made. The origin of the word " condom " is uncertain. Some authorities consider it to be derived from Condon, a French physician; others state that it is so named from the French town, Condom; others, again, suggest that it comes from the Latin word *condus*, something which protects or preserves. The contrivance certainly dates from very ancient times, and references to it are to be found in the writings of the Italian physician Fallopius and others of the sixteenth century, who also very wisely draw attention to the fact that the article requires care in its removal or the contents may be spilled into the vagina.

In elderly men and those who suffer from poor erections the supporting and stimulating apparatus known as " schlitten " or " erectors " (which are made of thin plates of

metal and fastened round the semi-erect organ with elastic bands) can also be covered with a condom when desired.

5. *Occluding the External Os Uteri.*—This has been done with a gold or silver instrument, in shape and size closely resembling a collar stud. The apparatus cannot be inserted by the woman herself, but requires the assistance of an expert. It has to be removed at each menstrual period and its use is not free from risk. Owing to the expense, inconvenience and loss of modesty connected with the insertion of this "obturator," it has only been popular with the wealthy, who can afford to engage someone with medical knowledge to be in regular attendance. In not a few instances it has induced septic endometritis and death. It is not by any means absolutely reliable. Various forms of rubber coverings for the external os have also been devised. These "occlusive pessaries" are supposed to fit tightly over the vaginal cervix and prevent the entry of semen into the external os. The trouble with most of them is that they come out of place during the violent movements of coitus, even if properly in position at the commencement of the act—always a somewhat doubtful point in any case, since they are usually applied under difficult conditions. Furthermore, all articles of this nature when frequently employed tend to produce vaginal irritation and catarrh, and frequently uterine and adnexal inflammation also. The special variety, which may be retained *in situ* for several days or weeks at a time, is fitted with a kind of watch-spring for this purpose and is definitely dangerous to health by reason of the pressure and irritation on the vaginal walls.

6. *Plugging the Upper Portion of the Vagina.*—Under this heading we include: (1) Packing a sponge well into the vagina so as to cover the external os. These "security sponges" frequently get packed solely into the posterior vaginal fornix and are then quite useless. (2) Anti-conceptional cotton-wool plugs made under various proprietary names. (3) Vaginal dilating air pessaries and various patent forms of plugging apparatus such as the Venus apparatus, Weissl's protector, Hüter's apparatus, etc. They have been extensively tried with varying degrees of success. None of them is reliable.

7. *The Use of Various Chemicals and Special Powders.*—Pessaries, injections, and insufflations of quinine, citric acid, boric acid, thymol, menthol, and a host of other drugs have been employed to prevent conception without much effect. The most commonly used are "security ovals" of quinine, which are supposed to dissolve in the vagina and kill the spermatozoa.

8. *Douching.*—If the vagina be carefully and efficiently douched immediately after coitus and with the woman lying on her back, impregnation is frequently avoided. Tepid water, or very weak solutions of quinine, boric acid, or alum may be employed. Plenty of the liquid must be used and the vaginal nozzle of the douche apparatus must reach the cervix and be worked all round it. The method is unreliable, generally because it is performed in an unsatisfactory manner.

9. *Artificial Production of Sterility in the Female.*—It is said that amongst certain primitive races the women are able to produce a temporary sterility by manipulating the uterus into a malposition, usually extreme retroversion. The method is unknown in this country and would almost certainly fail if attempted. The natives of Malaya, who practise it, appear to have an extraordinary power of muscular control over the sexual organs; thus, after coitus, they are easily able to expel semen from the vagina by certain peculiar pelvic movements.

Operative measures include ligature and division of both Fallopian tubes, removal of both ovaries and removal of the uterus. They are never undertaken in a healthy person, but only where there is severe local disease or deformity.

10. *Artificial Abortion.*—The procuring of abortion or any attempt at procuring abortion (or the administration of any drug or herb which, although quite harmless, was given with the idea in the mind of the donor that it might procure abortion) is an offence against the laws of all civilised countries and is punishable by long terms of imprisonment. All parties concerned in the giving and taking of abortifacients, or so-called abortifacients, as well as all parties concerned in any act or operation performed to procure abortion, are liable to imprisonment. Any medical man connected with the affair would, in

addition to the risk of imprisonment, be liable to have his name removed from the medical register. Most of this is well enough understood by the profession, but I doubt if it is always remembered that the administration of a perfectly harmless drug (given with the intent to induce abortion) may also be considered a criminal act in the eyes of the law.

Abortion may be caused by mechanical or medical means. The drugs commonly recognised as abortifacients include ergot, savin, quinine, yew, thuja, turpentine, cotton-root bark, tansy, rue, aloes, phosphorus, cantharides, oleum succini, pennyroyal, strong purgatives, and various decoctions of vegetable bitters. Mechanical causes of abortion include injuries to the abdomen, blows on the pelvis, violent massage, dilatation of the external os uteri with sounds, dilators, probes, or any such instruments, and perforation of the fœtal membranes. It is worthy of note that many so-called abortifacients are perfectly inert in this respect, that all are uncertain and unreliable, and that all are dangerous to the general health.

Abortion criminally performed by mechanical methods is fraught with such risks as to render it almost inconceivable that any sensible and educated person will undertake the operation. The practitioner faced with the tears and importunities of the misguided or unfortunate or outraged woman can only give one reply: "I sympathise with you with all my heart, but I am forbidden by the law to interfere, and I have not the slightest intention of helping you in any way to commit an illegal act." I maintain that even in the case of one's best patients and friends this is the only attitude to take up—firmness from the beginning.

11. *Operations upon the Male* include removal of the testicles, splitting the urethra, etc. They are unworthy of discussion since no sane man would desire to be mutilated in this way.

CHAPTER XVI

THE MENOPAUSE

THE menopause, or " change of life " as it is popularly called, is that period in woman's existence when her sexual activity, as manifested by menstruation and capacity for conception, comes to an end. The exact age at which sexual decay begins is very variable and depends upon race, the age at which menstruation originated, the number of pregnancies which may have occurred, the state of the general health, the woman's occupation and social position, and climatic conditions.

In this country, menstruation usually ceases about the age of forty-five, if an average be taken of all classes under all conditions. In southern climes the menopause begins earlier, and amongst Asiatics the age may be quite ten years less. Apart from climatic conditions it is probably correct to say that the earlier menstruation begins the later will it terminate. This applies to cases where puberty begins a year or two in advance of its ordinary time, but not if the commencement of menstruation is abnormally early (*e. g.* eleven or twelve years of age), in which case the menopause may also be premature. There are, of course, numerous exceptions to the general rule, and cases are recorded where women have begun with their periods at from eleven to twelve and continued to menstruate regularly up to fifty-five and sixty years of age.

Women who have married, lived normal sexual lives, and had several children whom they have suckled themselves, as a rule have a longer sexual life than those in whom these conditions have not prevailed. Too rapidly repeated and too many pregnancies, however, accelerate the onset of the menopause. Repeated abortions produce the same result, but pregnancies late in life retard the change. Marriage or sexual intercourse at a very early age tends to shorten the sexual life. Sterile married women usually have an exceptionally early menopause, whilst women who have had more than three children generally

continue to menstruate longer than those who have had less. Taken as a whole, women who have to work for their living by hard physical labour have about a year less of menstruation than those who lead average easy lives and belong to the middle and upper classes.

Delicate and weakly women, and especially those in whom the menstrual flow has always been somewhat watery or scanty, reach the climacteric much earlier than those who are strong and robust. The same applies to women who are very stout, to those of phlegmatic temperament, to blondes, and to women who have suffered from severe menstrual losses, severe or very numerous pregnancies, family troubles and sorrow, and from depressing and monotonous modes of life.

The state of the general health, beyond mere debility or obesity, has also much influence. Thus, tuberculosis, diabetes, exophthalmic goître, myxœdema, pernicious anæmia, puerperal and venereal infection, diseases of the genital organs, and occasionally acute fevers and rheumatism, may all produce an earlier climacteric than normal. Uterine and ovarian tumours sometimes induce a premature cessation of the menses, but more frequently the reverse condition prevails, uterine myomata being especially noteworthy in this connection.

Chronic inflammatory conditions in the pelvis with exudation and adhesions due to puerperal or gonorrhœal infection may produce atrophy of the ovaries by continued pressure upon them, and also by interference with the normal circulation of the parts. Women who, for the purpose of preventing further conception, suckle their children for long beyond the normal period often appear to induce a premature menopause by so doing. In certain cases *cessatio mensium præcox* follows immediately upon a severe mental shock, a very acute illness, a severe chill especially at the time of the periods, a heavy fall, or the taking of very strong drugs.

Family tendencies to an early menopause are not infrequently transmitted for generations Thus, one has seen cases where grandmother, mother and daughter all ceased to menstruate at about the age of thirty-two, whilst in none of them was any disease or pathological condition of any sort discoverable. It is especially noteworthy that in some of these cases children

may be born long after the cessation of the menses. It is, indeed, a fact that although, according to the best authorities, all potent ovarian tissue disappears well within four years after the menopause, cases have been from time to time recorded where pregnancy has taken place as late as twelve years after complete cessation of the periods. I would also mention that one occasionally sees cases where menstruation has ceased apparently for ever, but under improved conditions of life has returned after an interval of four years or longer.

The following interesting cases of pregnancy after cessation of the menses are worthy of special mention. *Case* 1.—A working woman, strong, muscular and in good health, began to menstruate at the age of thirteen, married at seventeen, had one miscarriage at nineteen and five children up to the age of twenty-nine; she ceased to menstruate at twenty-two and had three of her children after that age; after the periods stopped she had more or less constant leucorrhœa but no trace of hæmorrhage. *Case* 2.—A woman stopped menstruating at forty-nine, but was delivered of a healthy child at the age of sixty-one. *Case* 3.—A woman ceased to menstruate at forty-eight after having had her eighth child at the age of thirty-three. At fifty menstruation returned and she again became pregnant, and was delivered in due course of a ninth child who was strong and healthy. *Case* 4.—A woman began to menstruate at twenty, married, had her first child at forty-seven, and ceased menstruating, but had seven more children up to the age of sixty. Naturally such cases are extremely rare, but they have occurred and been vouched for by reliable authorities (Renaudin, Meissner, Mayer, Krieger).

The usual symptoms of the menopause are a gradual cessation of the menses after a period of irregularity, nervous attacks of flushing and perspiration, gastro-intestinal disturbances, epistaxis, irritability, depression of spirits and a tendency to obesity.

As a general rule the menopause is a very gradual process, extending over two or three years. Under ordinary conditions it is fraught with little or no danger to life, although a good deal of discomfort and inconvenience are commonly experienced. Occasionally the whole period of change may be passed through

without any disturbance or trouble worthy of note. On the other hand, in a small proportion of cases very severe symptoms are experienced which may permanently upset the mental balance, induce serious constitutional or local diseases, or render the patient a chronic invalid.

Commonly the periods do not come to a sudden stop, but the flow becomes gradually more and more scanty and the intermenstrual interval is lengthened. Menstruation thus comes on every six or eight weeks instead of monthly, or the flow may cease for three or four months and then continue regularly for a time, afterwards again stopping for perhaps the same period.

If the menstruation becomes gradually less and less, and the intermenstrual periods longer and longer, the constitutional disturbances are naturally slight. If, however, the flow stops suddenly and completely, the general health is liable to suffer, whilst the effects upon the nervous system may be profound.

Instead of gradual amenorrhœa we often notice temporary menorrhagia. It occurs in all classes, but perhaps most often in full-blooded women who have led an active sexual life and had a large family. Sometimes menorrhagia is the first indication of the onset of the climacteric, at others it may follow a period of suppression of the flow. Not infrequently it is severe and may produce a good deal of weakness and debility. Various causes are ascribed for its origination; amongst these may be mentioned: (1) Atrophy of the uterine muscle and consequent loss of contractile power, but without a corresponding diminution in size of the uterine blood vessels; (2) loss of tone in the tissues of the uterus plus congestion of the pelvic circulation and consequent distension of the blood vessels in the uterine mucosa; (3) arterio-sclerosis of the uterine blood vessels with actual rupture or the production of passive hyperæmia: this condition occurs both as part of a general arterio-sclerosis and as a purely local degenerative change; (4) chronic mild inflammatory changes in the uterine musculature and mucosa leading to hyperplasia of the organ.

The greatest care must be taken in all cases of menorrhagia to exclude actual disease of the uterus and adnexa. Thus, inspection and bimanual examination may show that what was originally supposed to be simple menorrhagia due to the meno-

pause is actually hæmorrhage from cancer of the uterus, fibroid tumour, ovarian cyst, polypus of the uterus, prolapse and ulceration of the uterus, adenomatous disease, and so on. Since the only hope of cure in all cases of cancer is early recognition and extirpation or destruction of the growth, it is easily seen that a thorough physical examination of every case of irregular or profuse hæmorrhage at the time of the menopause (when malignant disease is most common) is of paramount importance. As a rule, however, profuse loss of blood in pathological conditions is more often met with in fibroid tumours than in cancer of the uterus, where slight and irregular hæmorrhages, hæmorrhage on coitus and some offensive discharge are the typical features in early stages, although profuse hæmorrhage is experienced when large blood vessels become invaded by the malignant growth.

The disturbances of circulation which produce the tendency to venous stasis in the genital organs also affect the system generally, and the face-flushing, the sensations of heat and the profuse perspirations which are characteristic of the menopause are but the external manifestations of circulatory disorder. Internally the venous engorgement induces dyspepsia, gastric and intestinal catarrh, and a tendency to jaundice from hyperæmia of the liver and biliary ducts. Bleeding piles and epistaxis are similarly produced, and such symptoms as bronchitis, headache, impaired vision, noises in the ears, and fainting attacks may be attributable to hyperæmia affecting respectively the lungs, the meninges of the brain, the choroid of the eye, the internal and middle ear, and so on.

The influence of the nervous system in originating these various troubles through the medium of the heart and blood vessels is shown by the extraordinary way in which one part after another of the body is affected in turn. Thus, fugitive heats of the face and neck followed or accompanied by flushing and perspiration may be succeeded by an attack of epistaxis, a feeling of burning in the back, itching of the arms or legs, palpitation of the heart, fainting attacks, violent headache, depression of spirits, mental excitement, restlessness and confusion, muscular twitchings, neuralgia of the breasts, *et cætera.*

There is also no doubt that in cases where the moral character of the individual is altered and a woman who has previously led a blameless life becomes gradually eccentric, unreliable, and evinces a tendency to commit acts which bring her into conflict with the guardians of society, a good deal of the blame may sometimes be apportioned to a defective cerebral circulation for which she can in no wise be considered responsible.

The psychoses of the menopause are indeed of a very varied and often serious character, especially amongst women who have not had the opportunity or the means to satisfy their sexual desires, or whose sexual instincts have been held in abeyance or more or less completely suppressed. With such the climacteric sometimes deals very hardly. The local congestion of the genital organs excites sexual inclinations and desires of a particularly tormenting nature. Added to this the hyperæmia of the central nervous system distorts the imagination, so that the increased sexual irritability is translated by the brain into relationships with the outside world which have no foundation in fact. Thus, old maids, who form the great majority of these cases, not infrequently become afflicted by nervous disorders of the most diverse nature. They suffer from delusions and hallucinations of sensation and perception, they develop habits of self-abuse and may even search for abnormal methods of satisfying their sexual desires and inclinations, they devour lascivious literature and become hysterical or melancholic. Those who have inherited highly nervous or neurotic tendencies occasionally become actually deranged and even maniacal; sometimes they attempt suicide, at others they become passively depressed and irresponsible for their actions. As a rule the condition does not develop to such extremes, but even in the minor forms of mental trouble the patients are a source of considerable worry and anxiety to their relatives and friends. Not infrequently they form attachments to undesirable males, who take advantage of the circumstances to extort money or goods from their willing victims. On the other hand, the women sometimes force their society upon blameless and perfectly innocent men, and pester them to such an extent that they are driven to distraction and placed in a most unenviable position in the eyes of the outside world.

Probably the most distressing cases are those in which the afflicted woman develops the delusion that she is the object of sexual desires on the part of quite a number of men, generally complete strangers to her. She imagines that these men cast lascivious glances at her; that they desire to have sexual intercourse with her either by force, or by employing hypnotic influence which will deprive her of will-power to resist their advances; that they are constantly trying to make her commit immoral acts, and so on. Such cases are, of course, instances of delusional insanity, but as the women are usually quite sane on every other matter it is not easy to have them placed under restraint. A case which came under my notice a short time ago is typical of the condition. Miss S., a well-connected woman of forty-four years of age, who had done excellent home service during the recent war, came to me for advice and help. She stated that she suffered from constant pollutions which she declared were produced entirely by the erotic influence exercised over her by a male official under whom she worked in a Government office. The man, she said, constantly looked at her in a peculiar way and thereby caused her to become violently excited sexually. As a result she experienced a sense of great weakness and had an emission of fluid from her vagina. Sometimes no emission occurred, and she then resorted to masturbation in order to relieve her distress. Finally, she became so much upset by these occurrences that she openly accused the man of seeking to make her immoral. He promptly took measures to have her discharged from her position, and she received a notice from headquarters giving her a month's salary and immediate dismissal. She protested strongly and gave an account of her long and valuable services, which were so well substantiated that the authorities ordered an inquiry to be held, and asked her to produce medical evidence as to her state of mind and health; whilst her accuser was also required to prove his case. There was unfortunately no doubt possible as to Miss S.'s condition of mind, but it was also so clearly due to climacteric disturbances that, having managed to get in touch with her relatives, I arranged for her removal to a nursing institution, where she remained for some time and eventually recovered completely. A suitable explanation was made to

the authorities and the disagreeable position of the woman's superior was put right. The last was a matter of considerable importance, for the afflicted woman was possessed of such marked intellectual qualities and so apparently normal on all subjects except sexual ones that—her counter-accusation being couched in reasonable terms—she might have put the official in an awkward situation if medical evidence had not been forthcoming.

As a rule, however, climacteric patients suffering from sexual delusions make such wildly extravagant and ridiculous statements that even the most inexperienced layman will doubt their sanity. Where the erotic stimuli are very strong it is well known that patients may actually implore members of the opposite sex (with whom they have but the slightest acquaintanceship) to satisfy their desires by coitus, and should the request be refused, as is frequently the case, these women may make accusations of an immoral nature against their victims, who do not always find it easy to prove their complete innocence. As medical men themselves are occasionally involved in cases of this nature, one would suggest the need for extreme care and discretion in dealing with female patients suffering from the psychoses of the menopause. It is true that such depravity is but rarely met with, but the unexpected sometimes arrives, and the practitioner will do well to be always on his guard, for a false accusation that cannot be immediately and most convincingly disproved may do him much professional injury, besides causing him a good deal of mental distress and pecuniary loss.

The clergy are sometimes similarly subjected to much undesired attention by the middle-aged female members of their congregations. Usually this is expressed in the form of religious devotion and fulsome adulation of all the minister's actions, but occasionally the unfortunate man is led into sexual traps which may cause him much mental suffering and even ruin his career. I recollect the case of a young and enthusiastic minister who in the course of his parochial duties came into contact with a middle-aged spinster suffering from severe emotional disturbances of the menopause. Under the pretence of religious needs she induced him to visit her frequently, and

on such occasions took care to be alone in the house. Finally, she locked him in the room with her and divested herself of all clothing in the hope of obtaining sexual satisfaction. When this was indignantly refused she raised an outcry and brought in the neighbours, accusing the clergyman of an attempt at rape. The circumstances of the case were inquired into by the bishop f the diocese and the young man acquitted of all blame, but the publicity of the affair caused him such acute mental anguish that he resigned his living and left the district. A few months later the woman committed an act of public indecency and was removed to an asylum. The parishioners, some of whom had previously been sceptical of their late minister's innocence, then unanimously signed a paper expressing their regret at what had happened and their good wishes for his future. But the damage had already been done and could never be fully compensated for.

A noteworthy feature in some women at the time of the menopause is that they make every effort to conceal the fact that they are nearing the end of their sexual life. They dress themselves to appear younger than their years, join in every kind of social function, and if unmarried leave no stone unturned to make themselves attractive to the male sex and to secure, if possible, a partner in life. The plan occasionally succeeds, and then, as a rule, it is quite a young man who is captivated by their charms. There is something about them which appeals to the inexperienced, and this " something " is probably of a strongly sexual nature. The commencing obesity of the menopause rounds off the angles of age, the stimulated feelings and desires are employed to excite the younger male, and the desire to please and to flatter are not without effect. The results of such a marriage are inevitably disastrous. In a year or two the woman has lost much of her sexual ardour, the flash-in-the-pan attractiveness of the early period of the menopause has gone, and the woman becomes either very corpulent, or thin and angular. Signs of age begin to show themselves and the inexorable hand of time points out the grey hairs, the coarsening features, the flaccid muscles and the loss of the graceful figure of other days. When the young man is in his prime the wife is an old woman. There are no children

to bless the union. Society looks askance at the ill-matched pair and does not hesitate to gossip freely. The end is a foregone conclusion in the majority of cases and need not be considered here.

Where the woman does not succeed in marrying, mental and physical disquiet are common signs of the climacteric disturbances. She becomes more and more irritable, restless, erratic, unreliable and unreasonable, sleeps badly and is troubled with distressing or erotic dreams. Muscular twitchings, inability to sit still for more than a few minutes at a time, uneasy sensations in the head and hysterical outbursts are often noticed.

Married women, as already mentioned, usually get through the menopause with much less trouble than spinsters. This, however, is not always the case and sometimes the climacteric disturbances are very marked. Thus the husband may be much astonished by a sudden access of sexual desire on his wife's part, and may even find considerable difficulty in supplying her needs. Should he treat the matter with indifference he may run the risk of his wife's adultery, for occasionally spasms of intense voluptuous sensations destroy all moral control, or a continuous succession of erotic sensations and ideas lead to deliberate immorality as the only means of obtaining relief. The reverse condition—that of complete loss of sexual desire—is much less frequently noted as an initial symptom of the menopause; as a late symptom it is, of course, a natural one.

Apart from sexual neuroses, many women experience a marked tendency to fits of temper, and to become quarrelsome and disagreeable on slight provocation. They become vindictive towards those who offend them, and frequently display an amount of ill-humour which makes the home-life trying to their relatives and servants. Some married women become quite unable to control themselves in this respect, and by irritating their husbands to an utterly unreasonable extent are the cause of much domestic unhappiness. Others, instead of becoming irritable and excited, are profoundly depressed, unable to carry out their daily routine and appear to lose all interest in life. They neglect their homes, their husbands and their children; they complain of weakness and lassitude,

together with extreme fatigue on the least exertion, pains in the back, in the legs and in the region of the ovaries, a sensation of weight and pressure on the top of the head and in the temples, and feelings of nausea and dizziness. If induced to go out for walks their gait is unsteady, they stumble and fall over slight inequalities of the ground, and are in a constant state of dread lest they should be supposed to be intoxicated. The memory is impaired, the intellect clouded, the expression vacant, and a general impression of mental torpidity is given to the onlooker.

Amongst the neuralgias of the menopause the following are quite common: (1) Hemicrania, affecting the left side of the head rather more frequently than the right, and characterised by heavy boring pains with flushing of the skin and a rise of temperature over the affected part. (2) Neuralgia of the stomach with attacks of nausea, vomiting and central abdominal pain. (3) Neuralgia of the breast, where no physical abnormality can be made out, but where the patient is firmly convinced that she is developing cancer. Care must be taken in these cases to make a thorough examination, since we know that at the menopause actual cancerous growths are especially liable to commence and may be overlooked in their initial stages. (4) Pelvic neuralgia with pain in the region of the bladder and internal sexual organs, and irregular spasms in the perineum and groins radiating down the thighs.

Cutaneous hyperæsthesia affecting various parts of the skin surface is also common. It gives rise on slight provocation to severe itching, and when the vulva is involved pruritus may develop to such an extent as to render the patient almost demented. Anæsthetic areas of the skin may also be found, but this is decidedly a rarer condition than hyperæsthesia.

The abnormal activity of the skin and its glands which is especially noticeable in the flushings and sweatings of the menopause, may further manifest itself in the form of erythema, roseola, acne, seborrhœa, eczema and other dermatites. Of these, eczema is by far the most troublesome. It does not usually appear until the menopause is well advanced, but occasionally may accompany its onset. It is curiously persistent and rebellious to treatment and often becomes quite

chronic. It does not affect the trunk and appears to select for its favourite situations the ears, the scalp, the hands and the external genitals. In the latter region, when accompanied by the cutaneous hyperæsthesia already referred to, the results are most distressing. Vulval pruritus may, however, develop without eczema, and frequently no cause whatsoever beyond hypersensitiveness of the skin is discoverable. On the other hand, abnormal discharges from the uterus and vagina may be present, and these, being of an irritant nature, will certainly play a part in producing the disorder. Similarly, abnormal conditions of the urine, uterine growths and displacements, and diseases of the bladder and urethra, may all be of importance in the etiology of pruritus, for obvious reasons. The diagnosis of idiopathic pruritus vulvæ must, therefore, never be definitely made until every possible source of local irritation has been absolutely eliminated.

Of the cardiac and vascular troubles of the menopause the following are the most common—

(1) Attacks of palpitation which cannot be traced to digestive or emotional causes, and which may come on at any time during the day or night, and are accompanied by a feeling of suffocation or intense anxiety. The cardiac action is very rapid and powerful, the large blood vessels throb markedly, and there is a sensation of a rush of blood to the head. The patient may have an attack during sleep and be awakened by it and greatly alarmed. The paroxysm slowly passes off and may terminate in an outbreak of cold perspiration. Physical examination reveals nothing abnormal, the heart-sounds being quite pure.

(2) Shortness of breath, and palpitation on slight exertion, attacks of fainting or syncope, swelling of the feet and ankles, piles, varicose veins, slight albuminuria and other signs of venous engorgement may result from weak action of the heart due to an excessive tendency to obesity, with rapid deposition of fat in the myocardium.

(3) Great physical weakness, shortness of breath, palpitation, fainting attacks and symptoms of profound anæmia may follow severe losses of blood in the form of repeated attacks of menorrhagia.

(4) Where the patient has suffered from actual heart-disease of any kind before the menopause, the condition is always aggravated at this period, so that although previously the patient may have had fair compensation, cardiac insufficiency now begins to be marked.

(5) In elderly women arterio-sclerosis may be found with the usual symptoms.

(6) Gastro-intestinal irritation, especially in the form of dyspepsia, flatulence and intestinal stasis, is a potent factor in the production of palpitation and cardiac distress of a fugatory type.

(7) Purely nervous influences, such as shock, fright, anger, sorrow, worry, joy and excitement of any kind, cause much more cardiac disturbance at the climacteric than at other periods in the woman's life.

(8) Circulatory irregularities characterised by vertigo are not infrequently noticed. Their exact nature is a matter of dispute, both hyperæmia and anæmia of the brain being given as an explanation. Probably both conditions occur in turn. The patient when out walking or even when resting at home is suddenly attacked by dizziness, vision is dimmed, objects float about before the eyes, there is a singing in the ears, and a state of semi-consciousness is induced. The attacks may last only for a few seconds or for as long as half-an-hour.

Climacteric affections of the digestive tract have already been alluded to, but in addition to dyspepsia, constipation, diarrhœa and other common symptoms of the condition, special reference must be made to an excessive meteorism which frequently occurs and produces much discomfort. After quite an ordinary meal the patient becomes distended with gas in the stomach and bowels. The dilated stomach presses on the heart and induces tachycardia and irregular action, together with a sensation of suffocation and cardiac pain. The distended stomach and bowels produce such acute discomfort that the patient is obliged to unfasten her clothing to obtain a measure of relief. The condition frequently lasts for several years in spite of suitable medication: eventually it disappears as the menopause comes to an end.

Of disorders and diseases of the sexual organs which are met

with at the climacteric, incidental mention has already been made of several, but at the risk of being somewhat prolix I would again insist upon the importance of a thorough physical examination in all cases where hæmorrhage, discharge and local pain and tenderness are prominent features. Carcinoma of the uterus is characterised by irregular hæmorrhages, often slight in amount, which may be mistaken for irregularity or unexpected return of the menses, whilst the evil-smelling watery discharge of cancer may be considered as nothing more than an offensive leucorrhœa. Vaginal examination, however, will reveal the actual condition if the cervix be hard, eroded or actively diseased, and scrapings of the interior of the uterus will suffice to diagnose cancer of the corpus. Fibroids of the uterus can usually be felt on bimanual examination. If submucous or intramural they commonly cause menorrhagia and tend to prolong the menstrual flow for months or years after this should normally cease. The belief that they atrophy at the menopause and do not need removal if the patient is at this period of life is very frequently proved to be incorrect. Ovarian growths and inflammatory affections of the tubes and ovaries can scarcely be missed if the pelvis is carefully explored. Chronic metritis and endometritis require much care in diagnosis, and if accompanied by a hæmorrhagic and fœtid discharge will closely resemble malignant disease. Prolapse of the uterus and versions and flexions of that organ are recognised when a vaginal examination is made. Prolapse of the vaginal walls with the formation of cystocele and rectocele are similarly discovered.

As regards the bladder, weakness and loss of tone are frequently observed, so that the patient may at times have very imperfect control over this organ, and involuntary micturition or dribbling of urine becomes a source of much inconvenience and distress, both from the actual incontinence and from irritation and excoriation of the vulva. Cystocele, if present, often gives rise to cystitis with its attendant evils. As regards the rectum, hæmorrhoids are common and may become extremely painful, whilst free bleeding is often complained of. The latter sometimes does good, however, by relieving the pelvic congestion. Prolapse of the rectum in the form of rectocele is often seen, prolapse through the anus less commonly.

A peculiar atrophic affection of vulva and vagina, which has received the name of "kraurosis vulvæ," is sometimes noticed, usually after the menopause is concluded. The skin first becomes smooth and shiny, the meatus urinarius is red and carunculated and very tender to the touch. Later the labia minora atrophy and the vaginal orifice contracts so much that it will scarcely admit a sound. The vagina above the hymen is but slightly affected and the labia majora scarcely at all. The uterus is often very much smaller than normal. A yellowish discharge is present, there is pain on micturition and sexual intercourse is impossible. The complaint may last for many years and the atrophy of the parts is progressive.

Before bringing this brief survey of climacteric disorders to a close one might, perhaps, profitably make mention of a condition known as pseudocyesis, or spurious pregnancy, which is from time to time noted by all practitioners during their experiences of elderly females possessed of a strong desire for a family which does not materialise. The woman experiences by sheer force of imagination all the symptoms of early pregnancy. She has morning sickness, suppression of the menses, a growing enlargement of the abdomen and swollen breasts. She makes preparations for her expected confinement, engages a doctor and nurse, and at the estimated date of the birth may even experience something like mild labour pains. When nothing further happens she becomes alarmed and sends for the doctor, who now finds that the uterus is not enlarged and that the abdominal swelling is due to a deposit of fat in the tissues plus distension of the bowels with gas. The mental effects of this discovery upon the woman are often deplorable, for she experiences not only the blighting of her hopes and ambition to become a mother, but is also exposed to the laughter and ridicule of her friends and relations. To avoid these disasters the practitioner is recommended to insist upon a bimanual examination in all cases when he is first engaged to attend upon a woman at or about the period of the menopause.

The Treatment of the Menopause is a vast subject resolving itself, however, into questions of ordinary hygiene and general medicine, with a strong basis of common sense. As already mentioned, many women pass through the whole

period of sexual decay without any troubles worthy of note: they therefore, obviously, require no treatment at all. Such fortunate individuals have generally also experienced a perfectly natural puberty with an easy development into womanhood. They have married and enjoyed a normal amount of sexual relationship. They have had families and their confinements have been uneventful. They pass by stages of easy transition into sexual atrophy and remain physically and mentally active and healthy. Generally speaking, women whose life history is the reverse of that just mentioned suffer more or less from climacteric troubles and disorders. This is a rule which holds good in the vast majority of cases, but there are occasional exceptions, and now and then one meets with patients who have suffered severely during puberty, have led unsatisfactory sexual lives and been afflicted with various general and pelvic maladies, but experience no marked disturbances of any kind during the menopause.

Dealing first of all with general hygiene, the woman should be instructed to clothe herself warmly but not heavily, to take a regular amount of outdoor exercise, to practise strict cleanliness and take warm baths two or three times a week, to avoid exposure to cold and wet, and to lead as regular a life as possible. As regards diet she should live on plain food, avoiding all indigestible material and alcohol, and taking small meals at frequent but regular intervals. Sexual intercourse in married women should be restricted, and if an increase in the sexual appetite is developed, every effort should be made to control it by avoiding the excitement of too much social life and amusement and by an exercise of will-power and moral restraint. The frequent use of warm baths has a remarkably good effect in diminishing the uneasy sexual feelings which distress many climacteric patients, and practitioners are strongly advised to suggest their trial in suitable cases. The water should not be too hot or it may cause increased irritability instead of giving relief. Cold baths are contra-indicated in most patients, since the shock may be too much for the state of debility which so frequently accompanies the menopause. But water just a few degrees above the body-temperature soothes the nerves and calms the patient's feelings. The baths are best taken

immediately before retiring to rest; they may be omitted during periods of menstruation and resumed the day after the flow ceases. Perfumed bath-salts may be added to the water if desired, and sometimes the use of alkalis is beneficial if there is vulval irritation or skin eruptions. Besides their soothing action, warm baths naturally cleanse the skin and remove the perspiration and other products of the cutaneous glands which so frequently function with abnormal activity during the climacteric. The moral effect of bodily cleanliness is also not without importance.

Where actual pelvic inflammation is present, as in endometritis, metritis, perimetritis and pelvic cellulitis, much hotter baths than those just recommended may prove of service. They do good by aiding the absorption of inflammatory material and by lessening congestion of the internal organs. These results follow as a natural consequence of the dilatation of the cutaneous blood vessels and hyperæmia of the superficial tissues with a much accelerated process of tissue change in these parts, plus a direct influence of warmth and moisture. Attacks of heat and sweating, dizziness, and headaches of the hemicranic type are also much relieved by the lessened blood pressure induced in this way, whilst epistaxis and bleeding piles following a sudden cessation of the menses may be similarly benefited. By promoting free perspiration, hot baths are also useful in rheumatism, gout and obesity, all of which are common afflictions of many women at the menopause. In some cases general massage may be added to the hydrotherapy with advantage, but if the patient is at all inclined to sexual perversion or auto-eroticism any form of massage is contra-indicated.

Turkish, Russian and radiant-heat baths are not suitable for women at the climacteric. They cause a rise of temperature, an increase of pulse and respiration, and an augmented blood pressure, all of them too much for the ordinary woman to bear with safety at this period.

Although cold baths are not to be generally recommended, tepid water is sometimes useful in the form of sitz-baths for severe pelvic congestion; cold vulval douching if employed with care may relieve pruritus.

It is advisable to wash the vulva with warm water and a pure non-irritating soap at least once a day: the parts should also be dried with a clean soft towel after urinating. The anus should be cleansed with moistened cotton-wool after defæcation, and both vulva and perineum should be dusted with toilet powder twice a day. If the skin of these regions is very dry owing to atrophic changes, a little lanolin gently rubbed in morning and night is of service.

In very obese women special attention should be given to the skin of the armpits, beneath the breasts, in the groins, and between the legs. Free perspiration and friction tend to cause soreness in these localities unless they are most carefully looked after.

The use of a gymnastic home exerciser with a series of graduated exercises tending to develop the chest and abdominal muscles is quite good and may be advocated with advantage, but most women quickly tire of the procedure and cannot be persuaded to continue it for more than a very short time.

To avoid obesity plenty of open-air exercise is most valuable, not more than eight hours' sleep is to be permitted, the quantity of food taken must be appreciably reduced, especially the fats and carbohydrates, and the bowels must be kept free. To remedy constipation a glassful of either hot or cold water immediately after awakening is useful. Wholemeal bread, butter, oatmeal, rolled oats, lettuce, cauliflower, peas, carrots, turnips, juicy fresh fruit and stewed prunes and figs, are all good for the same purpose.

Where the woman is suffering from severe nervous disturbances, erotic excitement, increased blood pressure, sudden suppression of the menses, dizziness and confusion of ideas, it is often of the greatest advantage to put her to bed, purge the bowels freely, and maintain her upon a diet consisting solely of milk, cream-cracker biscuits and fruit for several weeks. Grape sugar may be added to the milk if constipation ensues. A similar diet (with as much rest as possible) is frequently of the greatest benefit in the treatment of stomach and bowel troubles. Indeed, these are nearly always more amenable to general than to local treatment, and it is very important for the practitioner to recognise this fact. Still, of course, such

medicinal remedies as bismuth, soda, magnesia, salol, nux vomica, belladonna, cardamoms, ginger, rhubarb, and so on have their legitimate uses which must not be neglected in obstinate gastro-intestinal cases, whilst the routine use of cascara, phenolphthalein, liquid paraffin, Epsom salts, seidlitz powders, sulphur, tamar-indien and other mild aperients is generally indicated. Strong purgatives such as aloes, jalap and colocynth are best avoided if possible; whilst castor oil, black draught and calomel are not suited for continued treatment, though excellent for a single administration.

Since cardiac irregularities are frequently due in some measure to stomach disorders the importance of attention to the latter is evident. The influence of the nervous system is probably even stronger, and remedies to soothe the nerves will also tend to quiet the heart. Thus, all climacteric cardiac disturbances are benefited by rest, gastro-intestinal medication, mild purgation, and nerve sedatives in the form of bromides, valerian, sumbul, and similar remedies. Where actual heart weakness or disease is present a somewhat different course will have to be adopted. A myocardium infiltrated with fat or a heart with leaking valves is not likely to be benefited by bromides—rather the reverse, even if some of the symptoms are neurotic in character. In such conditions remedies appropriate to the removal of obesity or to the provision of some degree of compensation are demanded. In the latter category digitalis or strophanthus may be required. For fainting attacks, cardiac stimulants in the form of aromatic spirit of ammonia, ginger and peppermint in hot water, hot strong coffee or tea, bovril, oxo, etc., may be given, but no brandy, whisky, wine, or other alcoholic beverage. Except in extreme emergency alcohol should never be taken by any woman at the menopause suffering from nervous troubles or cardiac disturbances. Similarly morphia, opium, heroin, cocaine, codeia, veronal, and all drugs of a like nature should be absolutely banned, and not only banned, but kept well out of the patient's way. Alcohol, morphia and cocaine have been the ruin of more climacteric patients than one cares to think about.

Bromides and valerian, on the other hand, are practically harmless if taken under medical directions; they are undoubtedly

very useful in relieving headache, sweating and flushing, nervous irritability and excitement, excessive eroticism, ovarian neuralgia, mammary discomfort and neuralgia, insomnia, and so on. If continued for some length of time the possibility of an irritating and unsightly bromide rash must be remembered. The addition of a minute quantity of arsenic usually prevents this trouble, and if the bromide is taken well diluted, the risk is still further decreased.

The use of ovarian and corpus luteum extracts is comparatively a new departure in the treatment of the menopause. Taken in small doses, gradually increased and continued for months, these preparations certainly seem to minimise some of the marked disturbances following rather sudden stoppages of the menstrual flow. It is most important to obtain freshly prepared extracts by a reliable firm: some of the material on the market is utterly useless.

With regard to this form of treatment we have still a good deal to learn about the endocrinous glands, and are not quite certain what part of the ovary is the secreting portion, although lutein tissue appears more active than the rest. In climacteric hyperthyroidism, pituitary extract may be given, with due care not to raise the blood pressure too much. Half c.c. doses may be tried hypodermically if the extract does not produce an adequate result by the mouth. The uncertain action of all glandular extracts is quite possibly due to the fact that we can only employ animal products which may differ a good deal from those of the human being.

Amongst general tonics for debilitated conditions of the patient iron and arsenic are always good, and may be given in the form of ferri et ammonii citratis and liquor arsenicalis. Glycerophosphates and hæmoglobin are also useful. Where flatulent dyspepsia prevents the taking of tonics, anti-dyspeptic drugs may improve matters sufficiently to permit a later re-trial of the iron and arsenic. The same applies to the exhibition of digitalis and strophanthus for cardiac weakness in dyspeptic patients.

In purely climacteric menorrhagia where cancer, fibroids, and actual disease are absent, curettage is often of considerable service, and its good effects may be supplemented by the

administration of freshly prepared calcium lactate in 15-grain doses once a day for several months, with weekly intervals every four weeks, and hydrochloride of cotarnine with hydrochloride of hydrastine, 1 grain of each, twice a day in the form of pills. Ergot and iodide of potassium have also been recommended, but are usually of little service, indeed ergot by raising the blood pressure sometimes makes the hæmorrhage worse.

Epistaxis may be alleviated by applying cold to the back of the neck and to the root of the nose; by putting the feet in hot water and placing the patient before an open window; by plugging the nostrils with gauze soaked in adrenalin or other astringent, and by free purgation. It should be remembered, however, that mild bleeding in this way may do good by depleting the circulation and lowering the general blood pressure, thus relieving such symptoms as headache, dizziness, noises in the ears, and mental confusion. Similar remarks apply to bleeding piles, but here local treatment in the form of bathing, gall and opium ointment, hamamelis and other astringent suppositories may be necessary to relieve the pain and inflammation, whilst mild aperients are indicated to prevent undue irritation from the passage of hard stools and to lessen pelvic congestion.

Many patients suffering from severe hæmorrhagic losses of various kinds are abnormally fat, and attention has frequently been called to this condition, the cause of which is unknown though generally considered to be due to a disturbed balance between the secretions of the ductless glands.

Medicinal treatment is of little avail to combat this marked tendency to obesity, and glandular extracts appear to be equally useless. There is no evidence of defective thyroid secretion, indeed hyperthyroidism is not infrequently noticed. Hence the administration of thyroid extract is practically always useless and sometimes definitely harmful, and cannot, therefore, be recommended. Patients should also be warned against taking patent anti-fat remedies, which often contain thyroid gland. Dieting, purgation, plenty of exercise and limitation of the hours of sleep are the only ways in which an improvement can be effected, and require medical supervision to regulate them to the constitution of the individual.

Since some of these obese patients appear apt to develop polyuria, a careful examination of the urine must be made to exclude diabetes, particularly in those cases where vaginal and vulval irritation is complained of. Glycosuria is one of the commonest causes of the latter troubles, and is unfortunately somewhat frequently overlooked, the pruritus of the external genitals being considered as one of the ordinary symptoms of the menopause.

Cutaneous affections of the vulva are treated on the ordinary lines of skin-disease generally. Thus erythema requires cleanliness, rest and the application of mild dusting powders such as boracic acid, subnitrate of bismuth, oxide of zinc, talc, starch, etc. Eczema is benefited by cleanliness, avoidance of all irritation and scratching, and the use of mild mercurial ointments, dusting powders, etc. If the skin is very dry formalin lotion followed by ammoniated mercury ointment are useful. If the skin is moist a dusting powder of talc and glutol, after removal of all crusts with warm water and soap, does very well. Constitutional causes, such as gout, rheumatism and diabetes, must be carefully attended to; and if there is uterine or bladder disease these must be put right, or the constant flow of irritating discharge or urine over the inflamed vulva will keep up the affliction indefinitely.

Kraurosis vulvæ is treated by the application of glycerine of belladonna, lead and opium lotion, dilute glycerine and carbolic lotion, cocaine ointment, and in severe cases by complete excision of the diseased area.

Vulvitis and vaginitis are treated by strict cleanliness, cure of any irritating discharges from the uterus and vagina, correction of any abnormal condition of the urine, repair of any fistulous openings into the vagina, and applications of mild antiseptic lotions and ointments such as lotio nigra; bismuth, zinc and cade lotion; zinc and ichthyol lotion; calomel ointment; carbolic-acid ointment; resorcin ointment; tar ointment, etc. Vaginitis if due to the long-continued use of a pessary may give rise to considerable inflammation and ulceration with a profuse and foul discharge. Removal of the pessary and douching with lysol or boracic lotion will then speedily

remove the trouble, unless the ulceration has progressed so far as to cause extensive destruction of tissue. Swabbing with solution of iodine and douching with alum is required when the vagina is resistant to milder lotions. Care is necessary to make sure that no malignant disease is present.

Retrogressive Pre-Climacteric and Post-Climacteric Changes in the Pelvic Organs

Some of these conditions have already been considered under the section just concluded. Others have only received passing notice, and a few have not yet been dealt with. It is, perhaps, best to reconsider the whole subject, since the diseases in question are often quite independent of the menopause.

1. Pre-Climacteric Changes.—In a few cases atrophy of the uterus occurs long before the period of normal sexual decay should take place. This may be due to superinvolution following pregnancy, or develop in patients who have never been mothers. The latter is extremely rare but does occasionally happen.

Superinvolution is a condition characterised by an abnormal shrinkage in size in the uterus after perhaps a perfectly normal confinement. The whole organ is much smaller than it was before and the cavity is correspondingly reduced. The mucous membrane is very thin and may sometimes be absent. Many of the blood vessels are obliterated and there is evidence of degenerative changes. Menstruation is either scanty or altogether wanting. Dysmenorrhœa or simply pain when the periods should come on is commonly noticed. Sterility very often follows and symptoms resembling those of the menopause, such as heat and flushing, sweating attacks, headaches, atrophy of the breasts, neuralgias, etc., are often developed. The causation is difficult to ascertain. Sometimes a history of pelvic inflammation is obtainable when destruction of the ovaries and interference with the blood supply of the uterus might explain matters, but when inflammatory trouble is apparently absent the etiology is naturally obscure. Treatment

is usually hopeless, but local electrical stimulation, tonics, hydrotherapy, fresh air and exercise, and dosage with thyroid extract may all be tried.

Atrophy not due to superinvolution sometimes follows severe general diseases such as phthisis, diabetes, exophthalmic goître, and insanity, in young women of twenty to twenty-five years of age, who are either fat, flabby and lethargic, or thin, weakly, anæmic and neurotic. In the former the condition may actually be the result of some deficiency or imperfect balancing of the internal secretions, and in the latter the atrophy may possibly be due to the anæmic state of the blood and general poor development. It is also difficult to be certain that these girls have ever had normal sexual organs, for most of them give a previous history of scanty menstruation or irregularity of the periods. The treatment in the fat, well-built girl consists in the administration of thyroid, ovarian, corpus luteum and mammary glandular extracts continued over a lengthy period of time in small doses. In the thin, anæmic and weakly girl one should make trial of iron, arsenic, quinine and other tonics, with plenty of good food, fresh air and moderate exercise.

2. Post-Climacteric Changes.—Normally all the sexual organs atrophy slowly but progressively after the menopause. The labia majora shrink and leave the nymphæ more exposed, the vaginal orifice contracts, the fornices are gradually obliterated and the cervix uteri can scarcely be felt. The vaginal walls become very smooth and the canal is cone-shaped. Senile vaginitis may occur and senile vulvitis is common.

Senile vulvitis may be due to any of the causes which produce ordinary vulvitis. It may also occur in the form of purple patches around the orifices of the urethra and vagina, accompanied by atrophic changes in the surrounding parts. The purple patches on careful examination show a loss of surface epithelium and exhibit dilated capillaries. The corium is infiltrated with leucocytes and the dilated blood vessels are seen just under the stratified epithelium, the condition being obviously one of superficial inflammation, probably produced by some kind of surface infection. The patches produce severe

pruritus and are painful to the touch. They are very chronic in nature, may partly heal in one place and break out in another, are accompanied by a little watery discharge, tend to cicatrise and contract the orifice of the vagina, and produce a marked vascularity around the meatus urinarius. Micturition, coitus and defæcation are all painful and sometimes actual ulceration may take place. The condition requires careful diagnosis from urethral caruncle, leukoplakia and kraurosis vulvæ. Occasionally it appears to develop into the last-mentioned condition, but is usually quite distinct from it. Treatment consists in giving alkalis, hyoscyamus and buchu to render the urine less irritating and in applying soothing lotions and ointments. Lotio nigra, weak carbolic ointment, calomel ointment, ichthyol and resorcin are amongst the best of these.

Leukoplakia of the vulva is another inflammatory condition of the external genitals due to some form of irritation and infection from the exterior. At first the vulva is red and swollen, but the meatus urinarius and vestibule are not affected and the diseased parts are dry and excoriated. Later the redness changes to a white sodden appearance, either patchy or general, and the labia minora shrink and harden. Finally, the tissues of the vulva crack and ulcerate, so that discharging bleeding fissures may be seen all over it. The disease may continue for a long time in this unhealthy and painful state, or the nymphæ and clitoris may be completely destroyed and the rest of the vulva atrophy to a smooth white surface. Sometimes the hardened tissues become epitheliomatous. Pathologically the condition is first of all inflammatory, then parakeratosis develops and is followed by desquamation of the horny surface epithelium, so that the tips of the papillæ of the corium are exposed to form cracks and ulcers. Elastic tissue is destroyed in the deeper layers of the skin, and fibrous tissue forms and cicatrises, thus producing the shrinking and hardening of the nymphæ and clitoris. The patient complains at first of intense itching and then gradually the parts become very painful and are exquisitely sensitive to the touch, whilst micturition and coitus are rendered difficult and nerve-racking. Treatment is directed towards an amelioration of the intense

itching and pain. Free lubrication with carbolic, calomel, resorcin, or cocaine ointment may do good, or bismuth, zinc and cade lotion, or hydrocyanic-acid lotion may be tried. In bad cases the whole of the vulva must be excised; whilst if malignancy is suspected a section should be cut from the tissues, and if epithelioma is discovered the widest possible removal of the growth together with all the glands in the groins is absolutely necessary. Malignant disease of the vulva is very frequently accompanied by leukoplakia, but it is comparatively rare to find simple leukoplakia actually developing into epithelioma.

Kraurosis vulvæ has no relationship with either senile vulvitis, cancer, or leukoplakia. It affects the nymphæ, the clitoris, the meatus urinarius, the vestibule and the vaginal orifice, but not the labia majoria. It has already been referred to.

Senile vaginitis is frequently produced by the wearing of unsuitable pessaries for long periods without due attention to cleanliness: it may also follow excessive coitus or be due to lack of ordinary hygiene. Sometimes no cause at all can be assigned, but there is no doubt that with advancing years the vagina becomes increasingly susceptible to any kind of local irritation and that infection with stray micro-organisms is more and more easily set up. The vaginitis usually comes on slowly and may pass unnoticed for some time owing to the mildness of the symptoms. Gradually the initial watery discharge becomes thicker and may be stained with blood. Later a purulent, offensive and sanguinolent discharge develops and causes vulvitis and irritation of the surrounding skin. Sensations of weight and discomfort in the pelvis are complained of, there is pain on coitus, micturition and defæcation, and even walking may be difficult. On examination, the upper part of the vagina is found to be reddened, inflamed and presenting areas of granulation tissue which bleed easily on slight pressure and are very painful. The cervix may be surrounded by a ring of cicatrised tissue and almost completely atrophied, so that it is only discovered with difficulty. The condition may so closely resemble cancer that it is advisable in all cases to examine a

section or scraping microscopically. The treatment is to use warm antiseptic douches freely after a preliminary good swabbing out with iodine in alcohol. Sulphate of zinc and alum douches may be employed later as astringents.

Senile endometritis may follow a senile vulvitis or vaginitis, or it may occur in a senile and atrophied uterus without any ascertainable cause. It is not an infrequent complication of cancer of the cervix or corpus uteri and is then especially prone to produce pyometra. In the latter condition exploration of the uterine cavity will be followed by a gush of purulent fluid which at once makes the diagnosis clear. The disease is so commonly associated with cancer that some authorities refuse to consider it as a separate entity. It must be remembered, moreover, that pyometra is not an invariable concomitant of uterine cancer, but only a frequent complication when endometritis is developed in addition to the malignant growth. Apart from cancer, senile endometritis is characterised by signs of inflammation in the lining membrane of the uterus, shedding of the surface epithelium and the formation of granulation tissue. The muscular tissue of the organ is markedly weakened, so that if pus forms it accumulates because it cannot be expelled by the inefficient muscular contractions. The pus then becomes offensive owing to the entrance in some way of the bacillus coli communis and other micro-organisms, whilst the passive dilatation of the cavity thins the uterine walls to such an extent as to render the uterus a mere bag of stinking pus. The symptoms of senile endometritis are very like those of cancer, from which, indeed, it can only be differentiated by a microscopical examination of curette scrapings. The patient complains of a watery and offensive discharge, often blood-stained and gradually becoming purulent. She is usually in very poor health and has a cachectic appearance. Pelvic pain and sacralgia are common, and if pyometra is present there may be pyrexia, rigors, sweating attacks, joint pains and swellings, rambling delirium and other signs of septic absorption. As a rule the Fallopian tubes and the ovaries are not affected. The treatment is to dilate the cervix, curette the diseased endometrium, drain out any pus that may have

accumulated, rub in iodised phenol thoroughly, pack with sterile gauze and leave this in for twenty-four hours or more to act as a further drain. If no pus is found, prolonged drainage is unnecessary, but if pyometra is discovered it may be advisable to leave in a rubber-tube drain for a week and douche the uterine cavity daily.

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